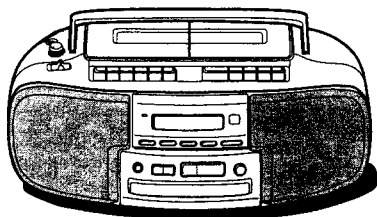


aiwa



CSD-SR615



COMPACT DISC STEREO RADIO
CASSETTE RECORDER

- BASIC TAPE MECHANISM:TN-21ZHW-1621
- BASIC CD MECHANISM:3ZG3-A7N

- TYPE:EEZ,EZ,LH,HE

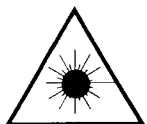
MANUAL SERVICE

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylit-tävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstråling, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

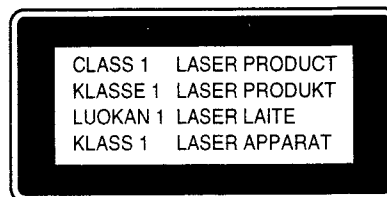
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.



■ ACCESSORIES / PACKAGE LIST

DESCRIPTION で判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
▲1	S1-171-100-000		CORD, POWER<LH>
▲1	S2-201-100-000		POWER CORD<HE, EEZ, EZ>
2	S5-438-910-200		INSTRUC, BOOK (SR615EEZ) <EEZ, EZ>
2	S5-438-910-300		INSTRUC, BOOK (SR615HEJ) <HE, LH>
3	SR-CSR-615-EX0		RC, RC-SR615EX<HE, EEZ, EZ>
4	S0-117-220-000		CONVERTOR 117V-220V<LH>
4	S0-220-117-000		CONVERTOR 220V-117V<HE>

SPECIFICATIONS

EEZ, EZ MODELS

Tuner section

Frequency range	FM: 87.5–108.0 MHz
	Antenna: FM antenna
	MW: 522/530–1,611/1,600 kHz (9/10 kHz step)
	Antenna: Ferrite bar antenna
LW: 153–288 kHz	
	Antenna: Ferrite bar antenna

Deck section

Track format	4 tracks, 2 channels
Frequency range	Normal tape: 50–12,500 Hz (EIAJ)
Recording system	AC bias
Erasing system	Magnet erase
Heads	Deck 1:
	Recording/playback head (1)
	Erasure head (1)
	Deck 2:
	Playback head (1)

CD player section

Disc	Compact disc
Scanning method	Non-contact optical scanner (semiconductor laser)
Laser	Semiconductor laser $\lambda=780$ nm
Rotation speed	Approx. 500–200 rpm/CLV
Error correction	Cross interleave, Reed Solomon code
No. of channels	2 channels
D/A conversion	16-bit linear

Common section

Speaker	100 mm cone type (2)
Output	Headphones jack (stereo mini-jack)
Power output	4.8 W + 4.8 W (DIN MUSIC POWER)
	4 W + 4 W (10% T.H.D./4 Ω DC)
	2.8 W + 2.8 W (DIN 1% Rated power)
Power requirements	DC 12 V using eight R14 (size C) batteries
	AC 230 V
Power consumption	25 W
Dimensions	406 (W) $\times$ 169 (H) $\times$ 218.5 (D) mm
	(16 $\times$ 6 $\frac{3}{4}$ $\times$ 8 $\frac{5}{8}$ in.)
Weight	Approx. 3.7 kg (8.1 lb) (excluding batteries)

- Design and specifications are subject to change without notice.

HE, LH MODELS

Tuner section

Frequency range <CSD-SR615HE>	FM: 87.5–108.0 MHz
	Antenna: FM antenna
	SW: 3.800–12.500 MHz
	Antenna: Ferrite bar antenna
MW: 531/530–1,602/1,600 kHz (9/10 kHz step)	
	Antenna: Ferrite bar antenna
<CSD-SR615LH>	FM: 87.5–108.0 MHz
	Antenna: FM antenna
	SW: 3.800–12.500 MHz
	Antenna: Ferrite bar antenna
MW: 530/531–1,710/1,602 kHz (10/9 kHz step)	
	Antenna: Ferrite bar antenna

Deck section

Track format	4 tracks, 2 channels
Frequency range	Normal tape: 50–12,500 Hz (EIAJ)
Recording system	AC bias
Erasing system	Magnet erase
Heads	Deck 1:
	Recording/playback head (1)
	Erasure head (1)
	Deck 2:
	Playback head (1)

CD player section

Disc	Compact disc
Scanning method	Non-contact optical scanner (semiconductor laser)
Laser	Semiconductor laser $\lambda=780$ nm
Rotation speed	Approx. 500–200 rpm/CLV
Error correction	Cross interleave, Reed Solomon code
No. of channels	2 channels
D/A conversion	16-bit linear

Common section

Speaker	100 mm cone type (2)
Output	Headphones jack (stereo mini-jack)
Power output	4 W + 4 W (4 Ω , EIAJ DC)
Power requirements	DC 12 V using eight R14 (size C) batteries
	AC 110–120V/220–240V selectable, 50/60 Hz
Power consumption	20 W
Dimensions	406 (W) $\times$ 169 (H) $\times$ 218.5 (D) mm
	(16 $\times$ 6 $\frac{3}{4}$ $\times$ 8 $\frac{5}{8}$ in.)
Weight	Approx. 3.7 kg (8.1 lb) (excluding batteries)

- Design and specifications are subject to change without notice.

ELECTRICAL MAIN PARTS LIST

DESCRIPTION で判断できない物は “REFERENCE NAME LIST” を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO.	PART NO.	カンリ NO.	DESCRIPTION	REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
IC				C315	87-010-380-010		CAP, E 47-16V
				C318	87-010-908-010		CAP, E 220-10V
	87-017-982-010		IC, BA5412	C319	87-010-265-010		CAP, E 33-16V
	87-017-486-080		IC, BA6397FP	C321	87-010-545-010		CAP, E 0.22-50V
	87-001-854-010		IC, BA7755A	C322	87-010-555-010		CAP, E 100-10V
	87-070-083-010		IC, GPIU281X				
△	87-001-196-010		IC, ICFN10	C323	87-010-053-810		CAP, E 1-50V
				C334	87-010-053-810		CAP, E 1-50V
	87-017-296-080		IC, LA1831N	C339	87-010-908-010		CAP, E 220-10V
	87-001-376-010		IC, LC7218	C345	87-010-555-010		CAP, E 100-10V
	87-001-982-010		IC, TA7291S	C348	87-010-555-010		CAP, E 100-10V
	87-017-681-010		IC, TA8126SN/TA8126S				
	87-017-680-010		IC, TA8176SN	C351	87-010-236-010		CAP, E 1000-10V
				C353	87-010-405-010		CAP, E 10-50V
	S8-381-890-000		IC, TA8189N	C354	87-010-405-010		CAP, E 10-50V
	87-002-407-010		IC, TA8191F	C476	87-010-221-010		CAP, E 470-10V
	87-002-408-010		IC, TC9236AF	C481	87-010-221-010		CAP, E 470-10V
	87-002-644-010		IC, TDA1311AT				
	87-070-324-010		IC, TMP47C820DF-NA41	C483	87-010-555-010		CAP, E 100-10V
				C486	87-015-698-040		CAP, E 4.7-50V
TRANSISTOR				C505	87-010-265-010		CAP, E 33-16V
				C506	87-010-265-010		CAP, E 33-16V
				C509	87-010-400-010		CAP, E 0.47-50V
	89-112-965-010		TR, 2SA1296GR				
	87-026-463-010		TR, 2SA933S	C510	87-010-400-010		CAP, E 0.47-50V
	89-109-521-210		TR, 2SA952/K/L	C513	87-010-380-010		CAP, E 47-16V
	89-210-154-010		TR, 2SB1185E/F	C514	87-010-380-010		CAP, E 47-16V
	89-318-154-010		TR, 2SC1815-Y	C517	87-010-053-810		CAP, E 1-50V
				C518	87-010-053-810		CAP, E 1-50V
	89-319-234-010		TR, 2SC1923				
	S3-287-800-020		TR, 2SC2878B	C523	87-010-053-810		CAP, E 1-50V
	S2-010-300-000		TR, 2SJ103GR	C524	87-010-053-810		CAP, E 1-50V
	89-501-615-080		TR, 2SK161	C531	87-010-375-010		CAP, E 330-10V
	89-502-465-080		TR, 2SK246Y	C532	87-010-035-010		CAP, E 2.2-50V
				C533	87-010-444-080		CAP, E 22-50V
	87-026-224-080		TR, DTA143XS				
	87-026-486-010		TR, DTA144TS	C534	87-015-698-040		CAP, E 4.7-50V
	87-026-291-010		TR, DTC124XS	C538	87-010-555-010		CAP, E 100-10V
	87-026-218-080		TR, DTC144ES	C539	87-010-053-810		CAP, E 1-50V
				C542	87-010-405-010		CAP, E 10-50V
				C543	87-010-053-810		CAP, E 1-50V
DIODE							
	S0-254-010-000		DIODE, 1N5401BL	C544	87-010-405-010		CAP, E 10-50V
	87-020-465-010		DIODE, 1SS133	C545	87-010-480-080		CAP, E 220-16V
	87-020-605-010		DIODE, 1SS135	C601	87-010-053-810		CAP, E 1-50V
	82-135-799-010		DIODE, 1N4148	C602	87-010-053-810		CAP, E 1-50V
	S3-KV1-260-400		DIODE, KV1260TS2	C603	87-010-053-810		CAP, E 1-50V
	87-002-730-010		DIODE, SVC203SPA	C604	87-010-053-810		CAP, E 1-50V
	S0-100-221-200		ZENER, 2.2V	C605	87-010-908-010		CAP, E 220-10V
	S0-100-521-200		ZENER, 5.2V, 1/2W	C615	87-010-053-810		CAP, E 1-50V
	S0-100-681-200		ZENER, 6.8V, 1/2W	C616	87-010-053-810		CAP, E 1-50V
	S0-100-821-200		ZENER, 8.2V, 1/2W	C617	87-010-405-010		CAP, E 10-50V
	83-NEG-678-080		ZENER, MTZJ6.2VA1/2W	C618	87-010-405-010		CAP, E 10-50V
				C619	87-010-045-010		CAP, E 100-25V
				C621	87-010-249-010		CAP, E 470-16V
				C622	87-010-249-010		CAP, E 470-16V
				C623	87-010-380-010		CAP, E 47-16V
MAIN C.B							
BPF1	S1-000-060-000		BANDPASS FILTER	C624	87-010-380-010		CAP, E 47-16V
C21	87-010-544-010		CAP, E 0.1-50V	C630	87-010-053-810		CAP, E 1-50V
C43	87-010-403-010		CAP, E 3.3-50V	C631	87-010-038-010		CAP, E 22-25V
C45	87-010-405-010		CAP, E 10-50V	C671	87-010-405-010		CAP, E 10-50V
C48	87-010-908-010		CAP, E 220-10V	C673	87-010-908-010		CAP, E 220-10V
C51	87-010-035-010		CAP, E 2.2-50V	C674	87-010-678-010		CAP, E 3300-25V
C52	87-010-053-810		CAP, E 1-50V	C675	87-010-038-010		CAP, E 22-25V
C53	87-015-698-040		CAP, E 4.7-50V	CF1	S0-001-070-010		CER, FILTER
C57	87-010-053-810		CAP, E 1-50V	CF2	S0-001-070-010		CER, FILTER
C58	87-010-053-810		CAP, E 1-50V	CT1	S2-001-690-000		TRIMMER TZ03R300FR169<EEZ, EZ>
C62	87-010-035-010		CAP, E 2.2-50V	CT1	S2-101-690-000		TRIMMER TZ03T110FR169<HE, LH>
C64	87-010-045-010		CAP, E 100-25V	CT2	S2-101-690-000		TRIMMER TZ03T110FR169<EEZ, EZ>
C74	87-010-045-010		CAP, E 100-25V	CT2	S2-001-690-000		TRIMMER TZ03R300FR169<HE, LH>
C79	87-010-249-010		CAP, E 470-16V	F301	S1-011-620-000		FERRITE BEAD INDUCTOR
C82	87-010-545-010		CAP, E 0.22-50V	F302	S1-011-620-000		FERRITE BEAD INDUCTOR
C83	87-010-545-010		CAP, E 0.22-50V	L2	S0-550-550-070		COIL, FM 5.5T
C91	87-010-380-010		CAP, E 47-16V	L3	S0-102-270-000		INDUCTOR 2.2UH
C302	87-010-908-010		CAP, E 220-10V	L4	S0-450-550-070		COIL, FM 4.5T
C307	87-010-038-010		CAP, E 22-25V	L5	S0-091-320-070		IFT, PA7BRS-A9132CCG<EEZ, EZ>
C314	87-010-403-010		CAP, E 3.3-50V	L5	S0-091-310-070		IFT, PA7BRS-A9131CCG<HE, LH>

TRANSISTOR ILLUSTRATION

REF. NO.	PART NO.	カンリ NO.	DESCRIPTION	REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
L6	S0-091-310-070		IFT, PA7BRS-A9131CCG<EEZ, EZ>	D730	87-017-663-080		LED, 5-5 (RED)
L6	S0-091-330-070		IFT, PA119ANS-A9133G0<HE, LH>	L701	S0-104-760-000		INDUCTOR, 47UH
L7	S0-100-140-000		INDUCTOR, 100UH	L702	S0-102-270-000		INDUCTOR 2.2UH
L8	S0-100-140-000		INDUCTOR, 100UH	LCD701	S0-043-610-000		DISPLAY LCD BU4430AZ
L9	S0-091-340-070		IFT, A7BRCs-A9134	SW705	SK-HH9-010-000		SW, TACT SKHHAK
L10	S0-100-140-000		INDUCTOR, 100UH	SW706	SK-HH9-010-000		SW, TACT SKHHAK
L11	S0-104-770-000		INDUCTOR 4.7UH	SW707	SK-HH9-010-000		SW, TACT SKHHAK
L70	S0-611-441-200		COIL, ANT MW	SW709	SK-HH9-010-000		SW, TACT SKHHAK
L71	S2-500-041-200		COIL, ANT LW<EEZ, EZ>	SW710	SK-HH9-010-000		SW, TACT SKHHAK
L71	S0-090-311-200		COIL, ANT SW<HE, LH>	SW711	SK-HH9-010-000		SW, TACT SKHHAK
L301	S0-100-140-000		INDUCTOR, 100UH	SW712	SK-HH9-010-000		SW, TACT SKHHAK
L302	S0-100-140-000		INDUCTOR, 100UH	SW713	SK-HH9-010-000		SW, TACT SKHHAK
L304	S0-102-270-000		INDUCTOR 2.2UH	SW714	SK-HH9-010-000		SW, TACT SKHHAK
LS3	S1-450-240-040		COIL, FM 14.5T	SW715	SK-HH9-010-000		SW, TACT SKHHAK
MFT1	S0-006-600-070		IFT, AND CER FIL PCFMT-066	SW716	SK-HH9-010-000		SW, TACT SKHHAK
SFR1	S5-030-650-000		SFR, 50K	X701	S6-004-000-000		CER, RESO 4MHz
SFR301	S4-720-851-010		SFR, 4.7K	X702	S3-327-680-000		X, TAL 32.768KHZ
SFR302	87-024-176-080		SFR, 100K				
SFR501	S2-220-850-000		SFR, 2.2K				
SFR502	S1-030-851-000		SFR, 10K				
				DRIVE C.B			
SW601	S4-300-710-030		SW, SLIDE SS43D606G7AA	M1	87-045-356-019		MOT, RF-310TA 30
T501	S0-036-300-100		IFT, 4A363R(B)	M2	87-045-358-019		MOT, RF-310TA 43
X1	S6-072-000-020		X'TAL, 7.2MHZ	SW1	87-036-340-019		SW, LEAF LSA-1121
X2	S6-010-700-010		CER, RESO 10.7MHz				
X3	S0-004-570-000		CER, RESO KBR-457HS15				
				MOTOR CD C.B			
X301	S0-016-930-000		CER, RESO 16.93MHz	M1	87-045-305-019		MOTOR, RF-500TB
				SW1	87-036-110-019		SW, PUSH SPPB 62
				SW2	87-036-110-019		SW, PUSH SPPB 62
VOL C.B							
J601	S0-020-003-500		JACK, HP 3.5MM				
VR601	S5-030-020-030		VR, 50K				
FRONT C.B							
C702	87-010-405-010		CAP, E 10-50V				
C710	87-016-040-080		CAP, E 47000-5.5V				
C716	87-010-053-810		CAP, E 1-50V				
C717	87-010-544-010		CAP, E 0.1-50V				
C742	87-010-045-010		CAP, E 100-25V				



2SA1296GR
2SA933S
2SA952/K/L
2SC1815-Y
2SC1923
2SC2878B



2SB1185E/F



DTA143XS
DTA144TS
DTC124XS
DTC144ES

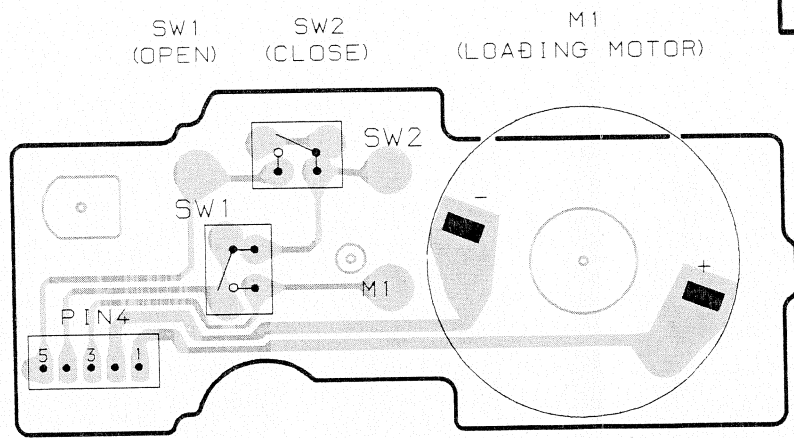
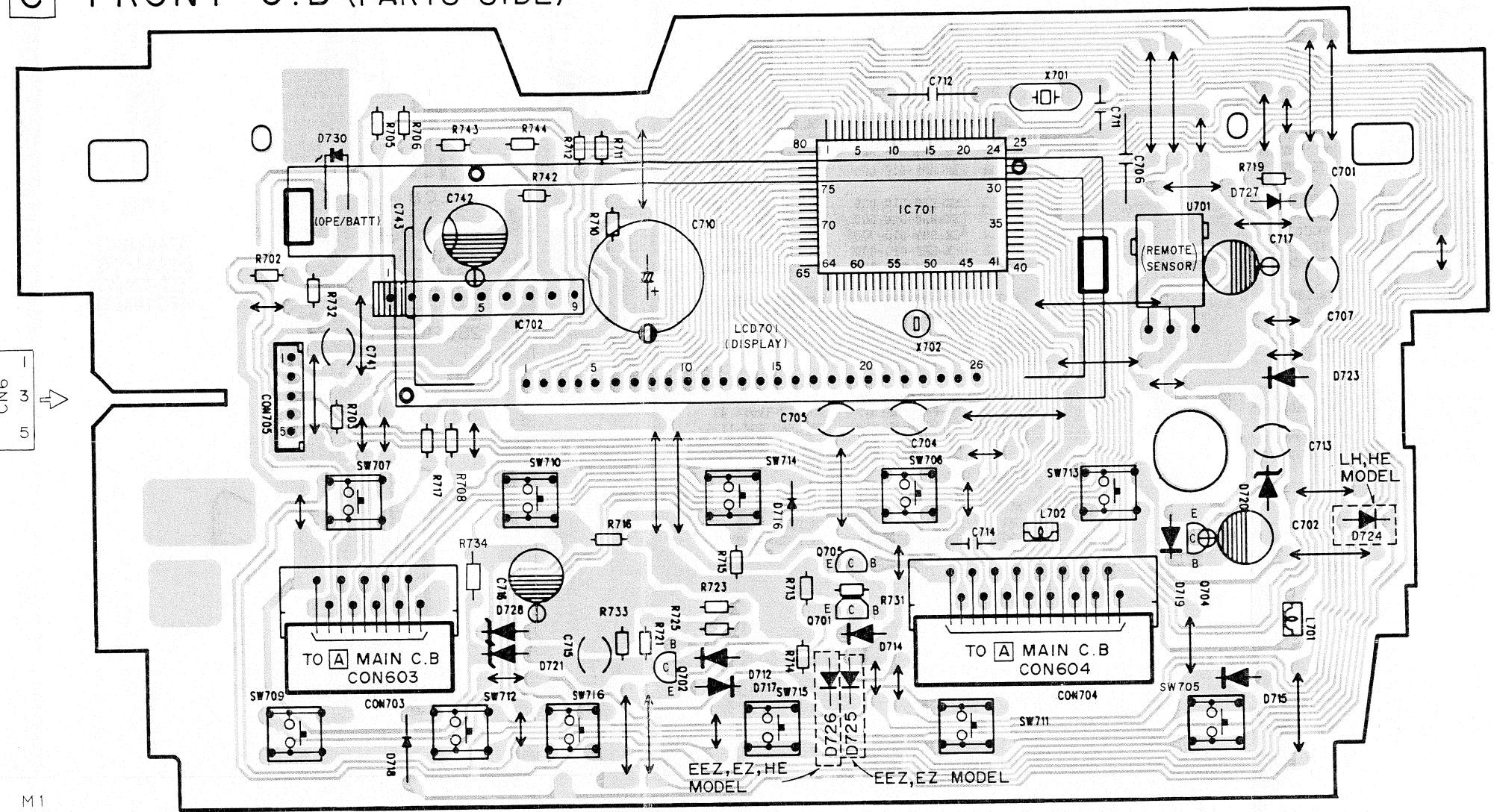


2SJ103GR
2SK246Y

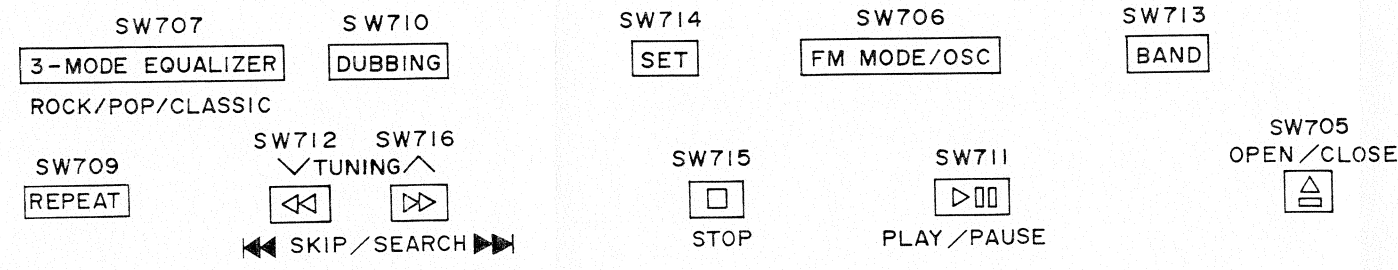


2SK161

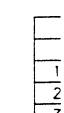
C FRONT C.B (PARTS SIDE)

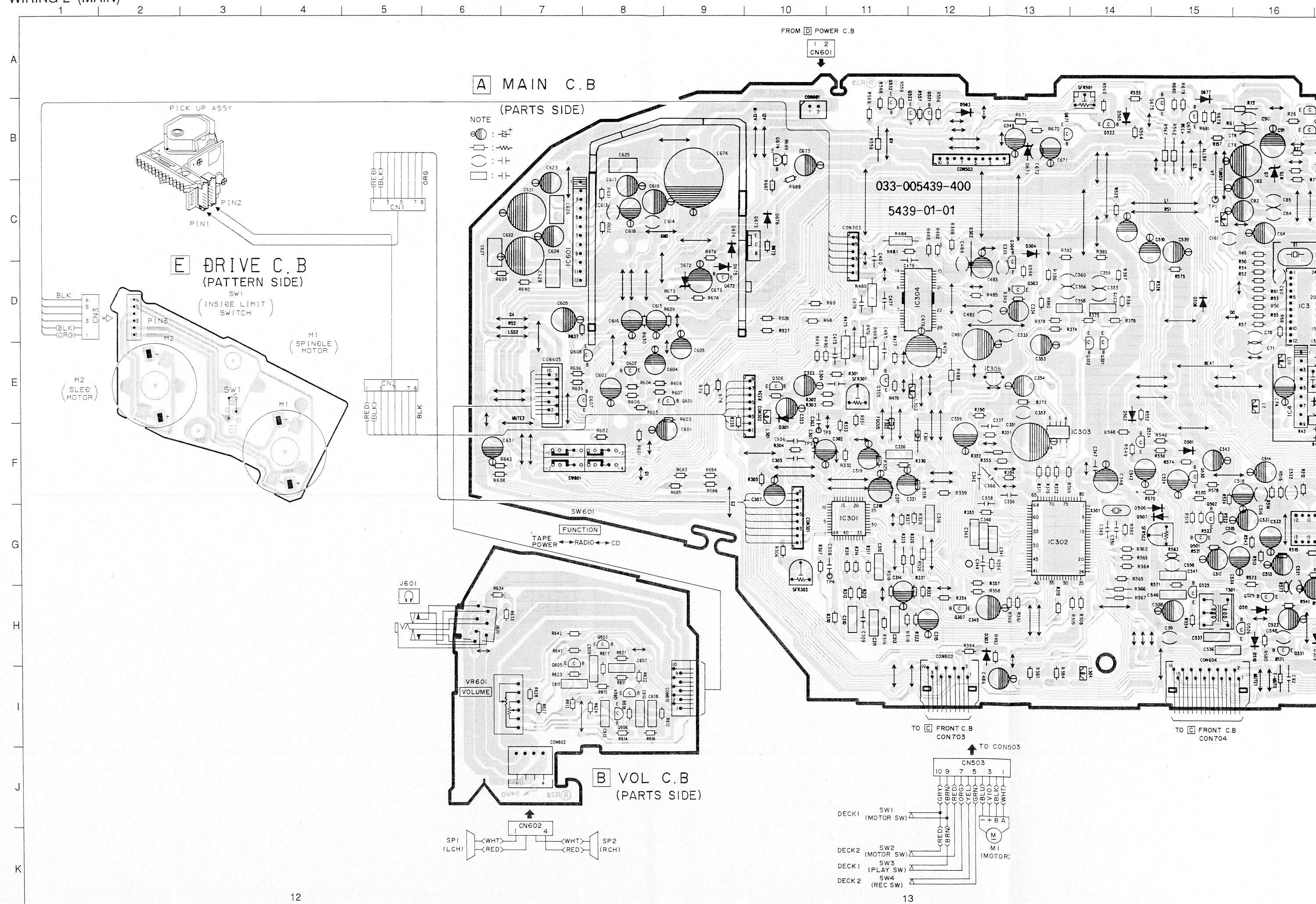


F MOTOR C.D C.B (PATTERN SIDE)

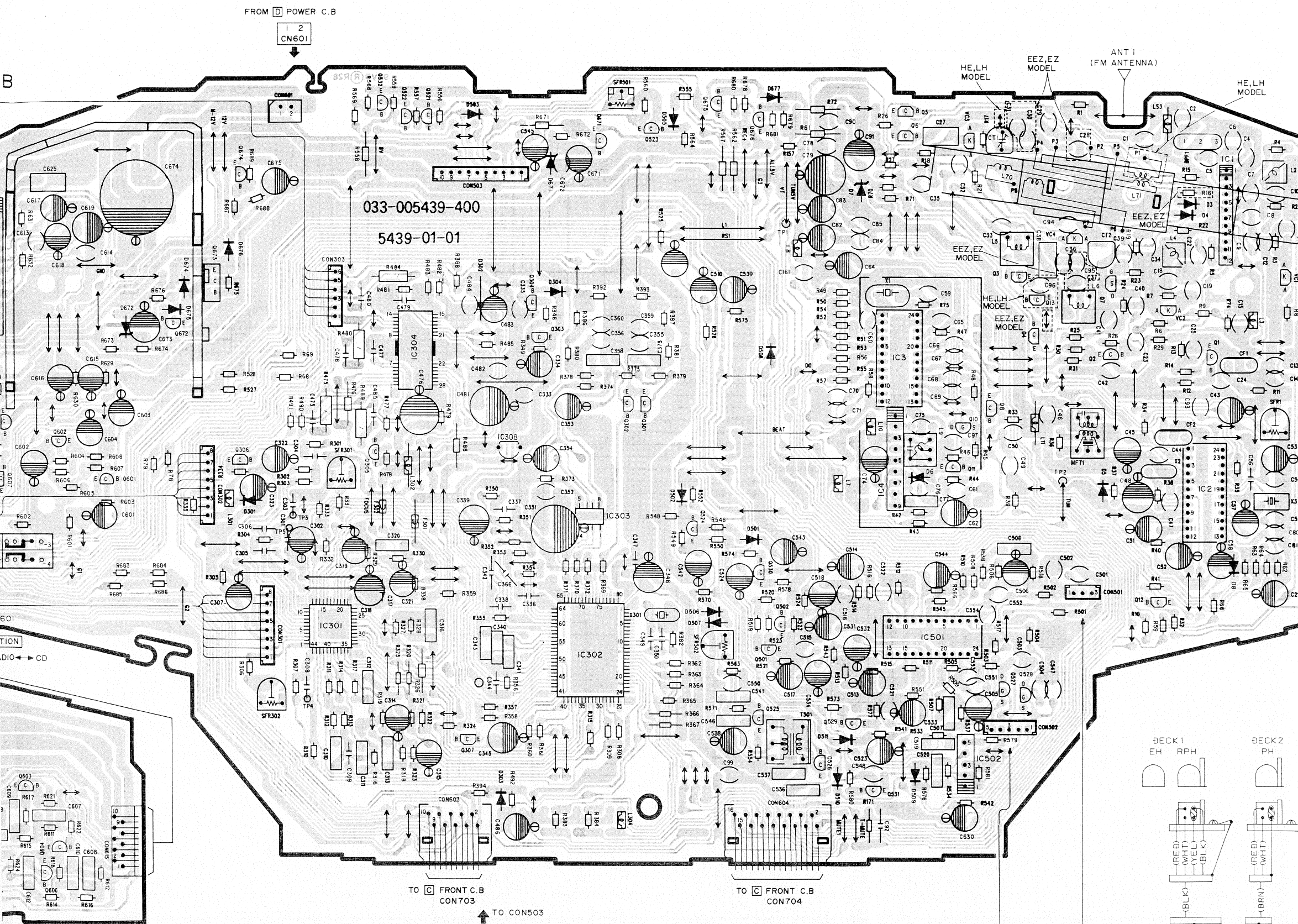


NOTE
⊕ : ⊕
⊖ : ⊖
⊕ : ⊕

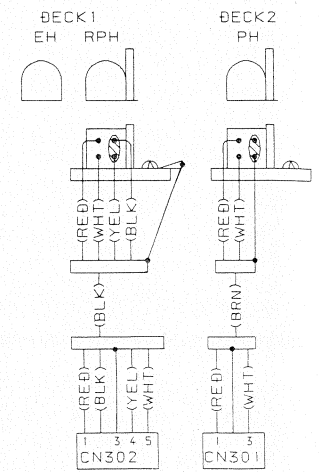
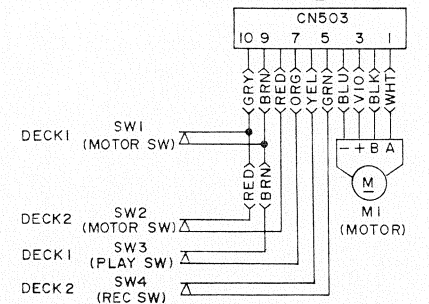




B

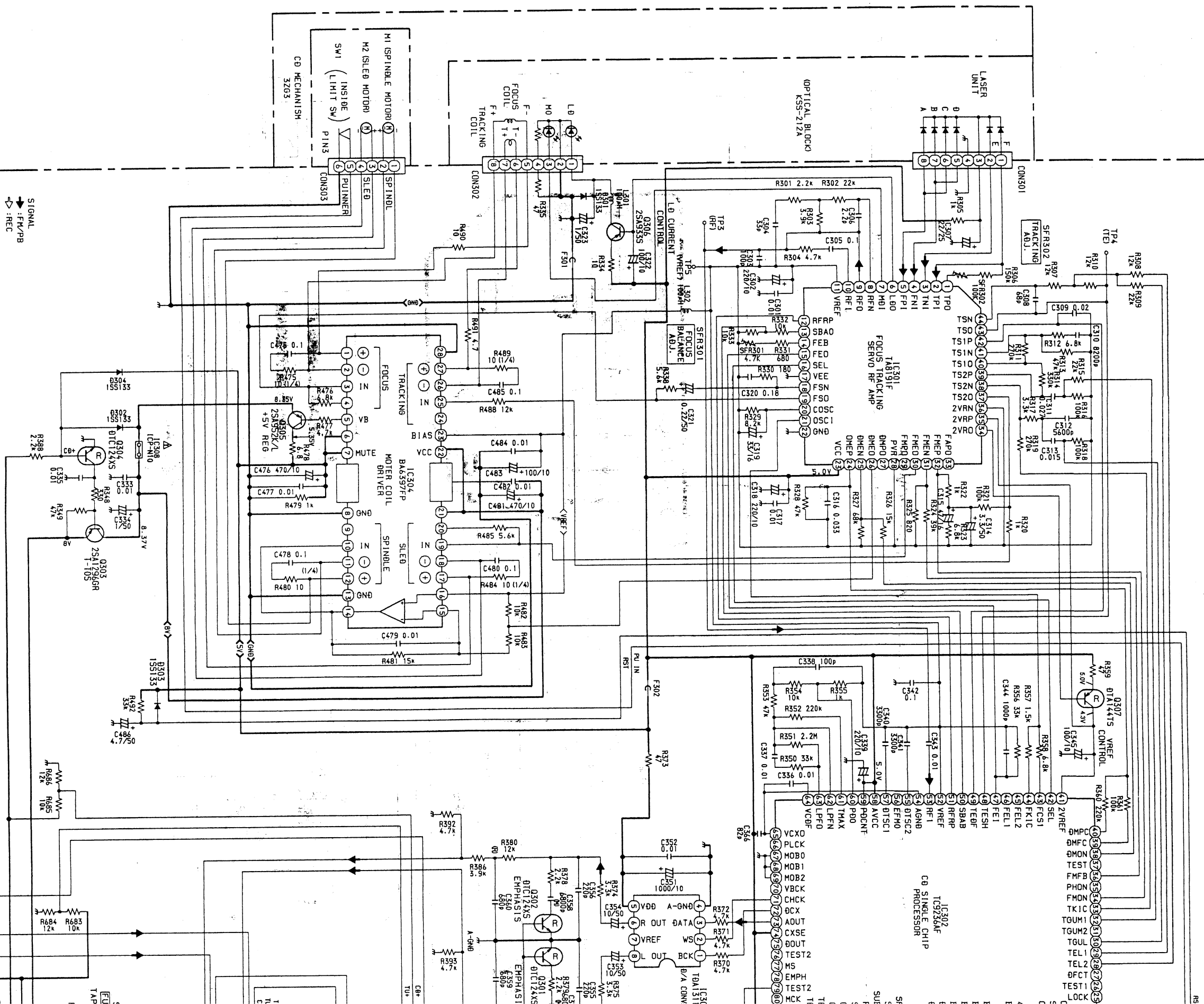


B VOL C.B
(PARTS SIDE)



SCHEMATIC DIAGRAM-2 (MAIN 1 / 2)

A MAIN C.B (1/2)



TA8189N (IC501)

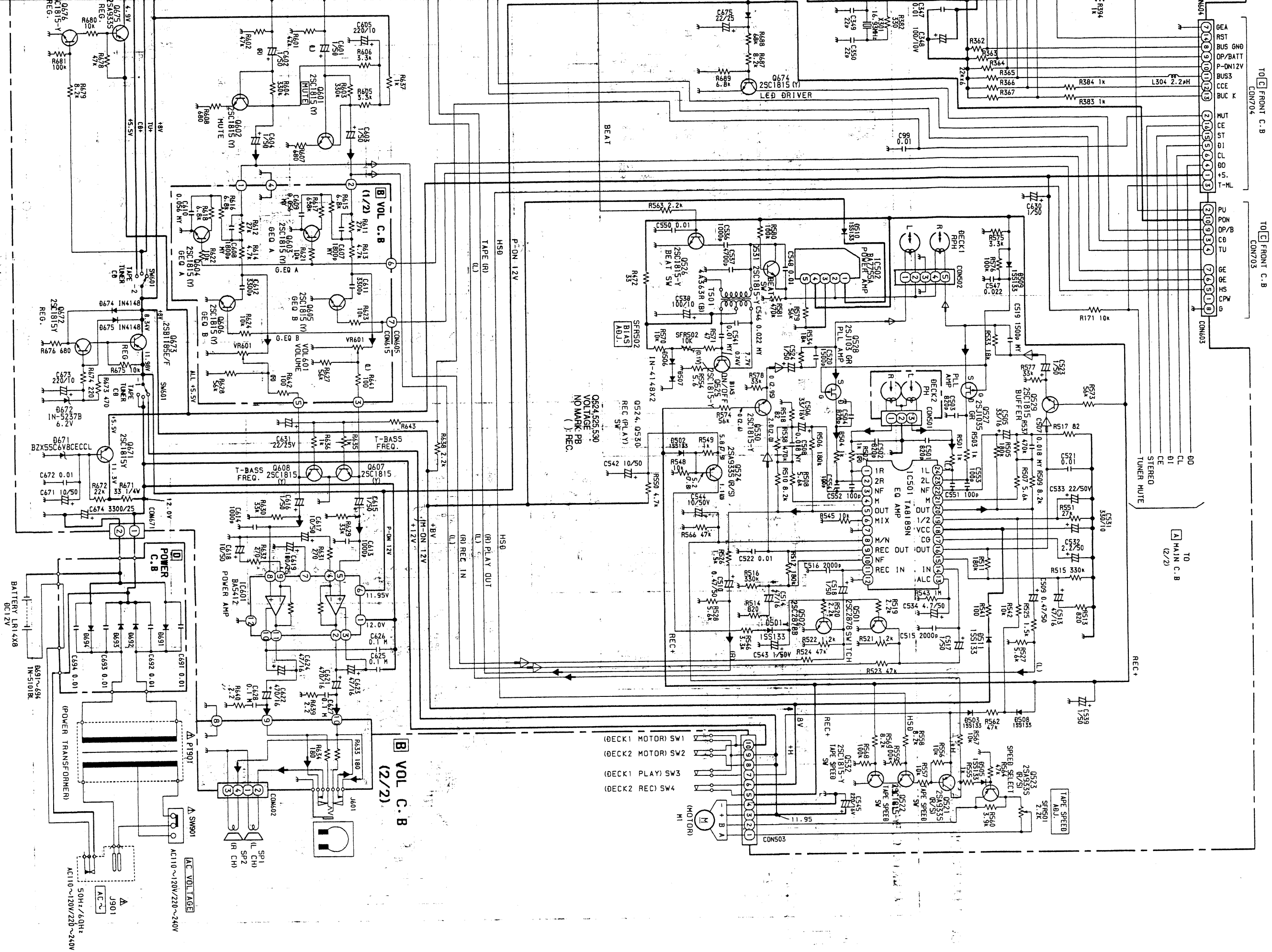
※ WHEN HIGH SPEED DUBBING 7.4V

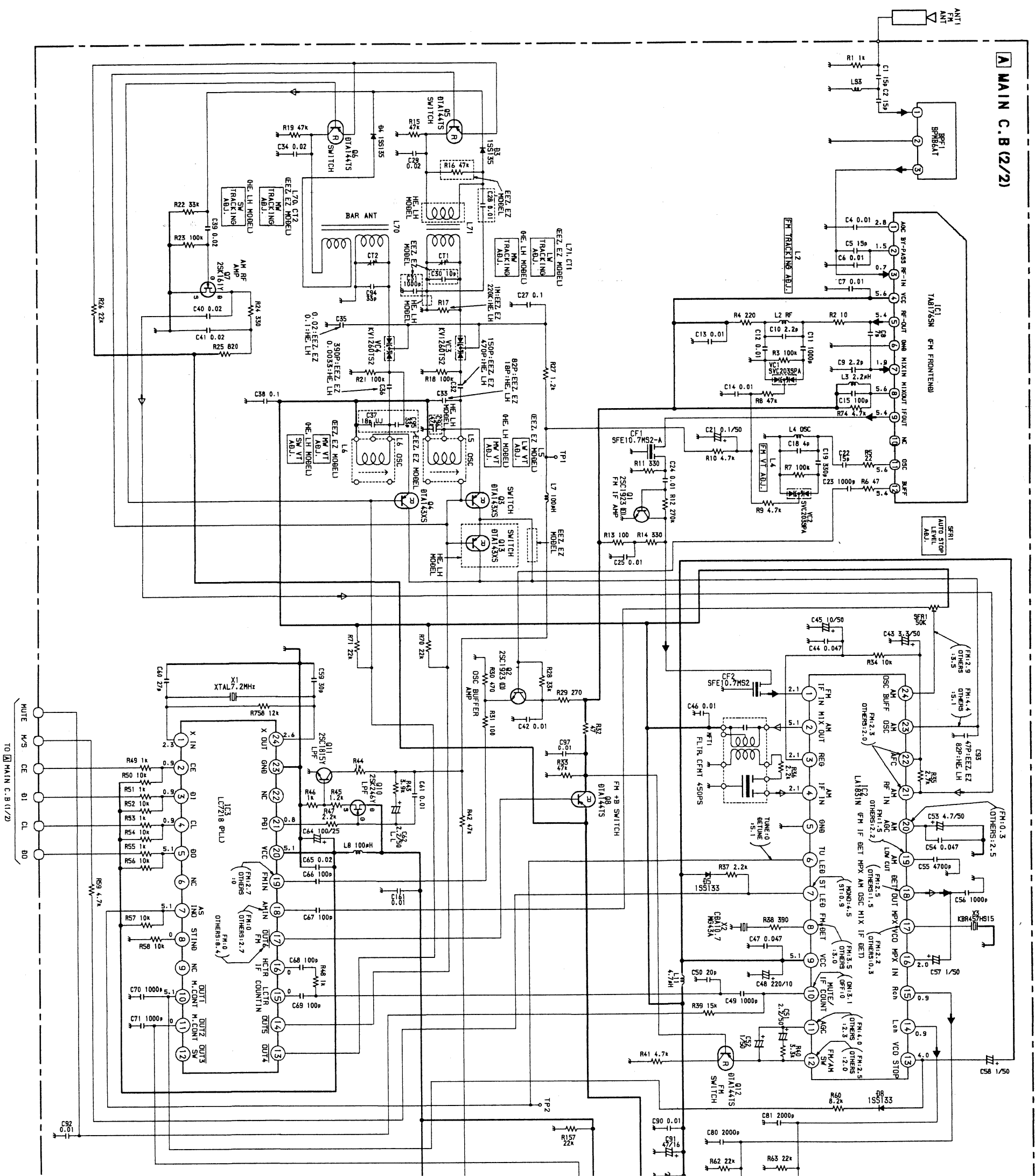
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PLAY	0	0	1.24	1.27	1.29	1.26	0	0	2.0	1.25	0	0	0.82	0	1.23	1.95	1.4	6.8	0	1.32	1.29	1.21	0	0
REC	0	0.17	1.24	1.24	1.26	1.23	0	0	2.0	1.25	0	0	0.82	0	1.23	1.95	1.4	6.8	5.7	1.28	1.25	1.21	0.18	0

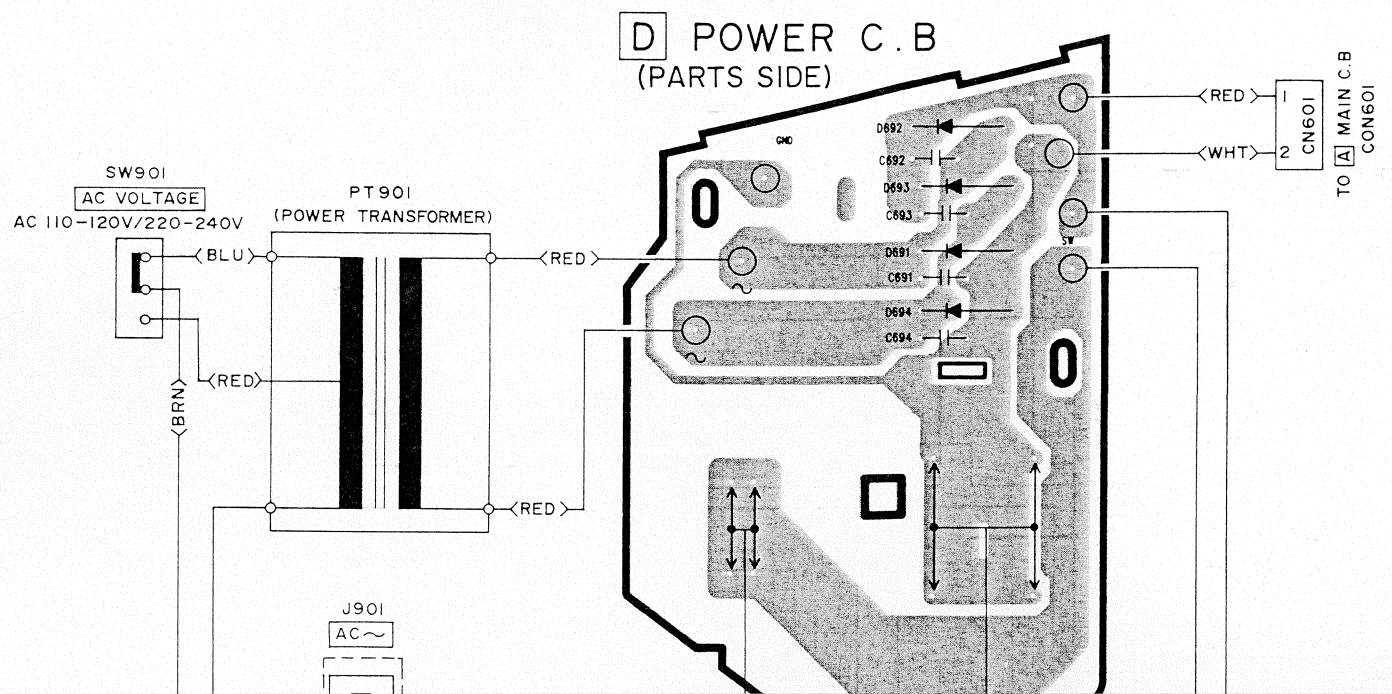
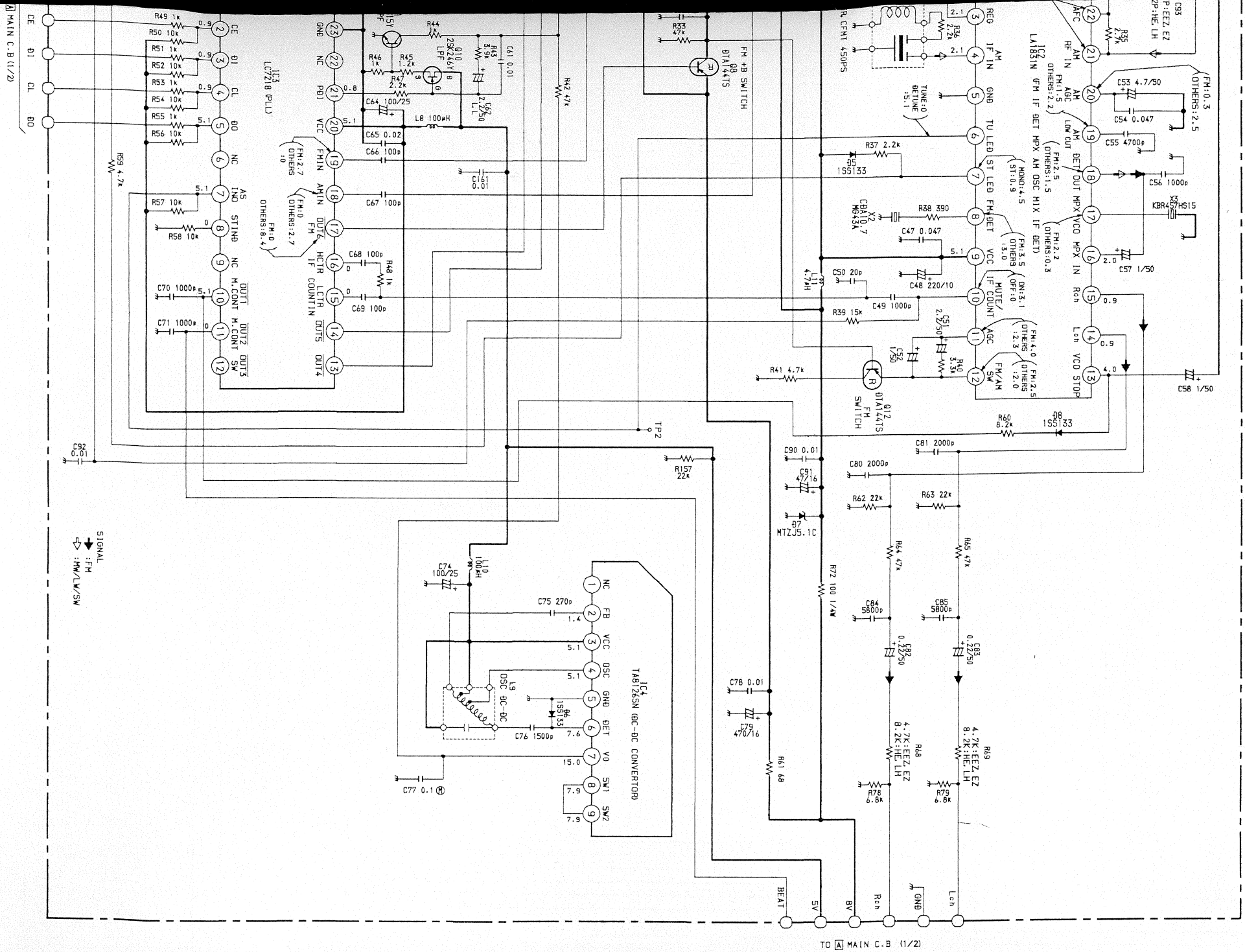
IC BA6397 (IC304)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
STOP	3.85	3.92	2.16	2.15	6.97	5.0	5.0	0	2.15	2.15	3.88	3.88	0	2.15	2.15	2.14	3.92	3.85	2.14	2.14	8.37	8.37	2.14	2.13
PLAY	3.75	4.20	2.22	2.15	6.32	5.0	5.0	0	2.15	1.92	3.59	4.10	0	1.94	2.14	2.14	3.90	3.76	2.12	2.14	8.32	8.32	2.14	2.15

TO MAIN C.B (2/2)







WIRING-3 (POWER)

D POWER C.B. (PARTS SIDE)

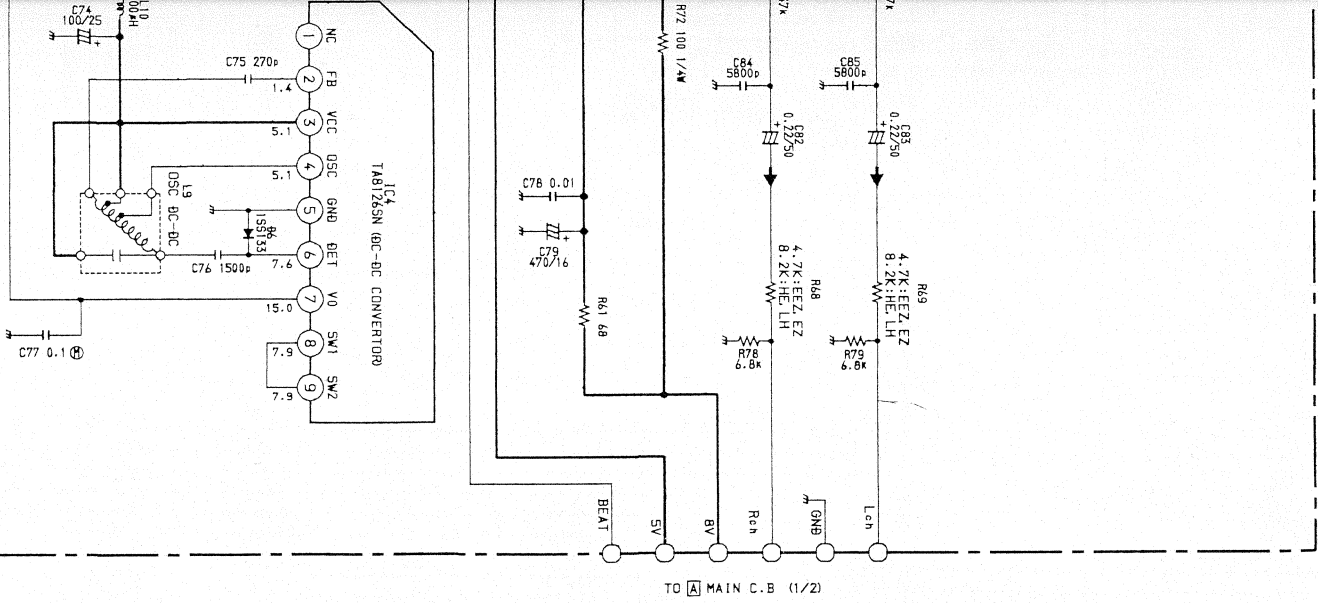
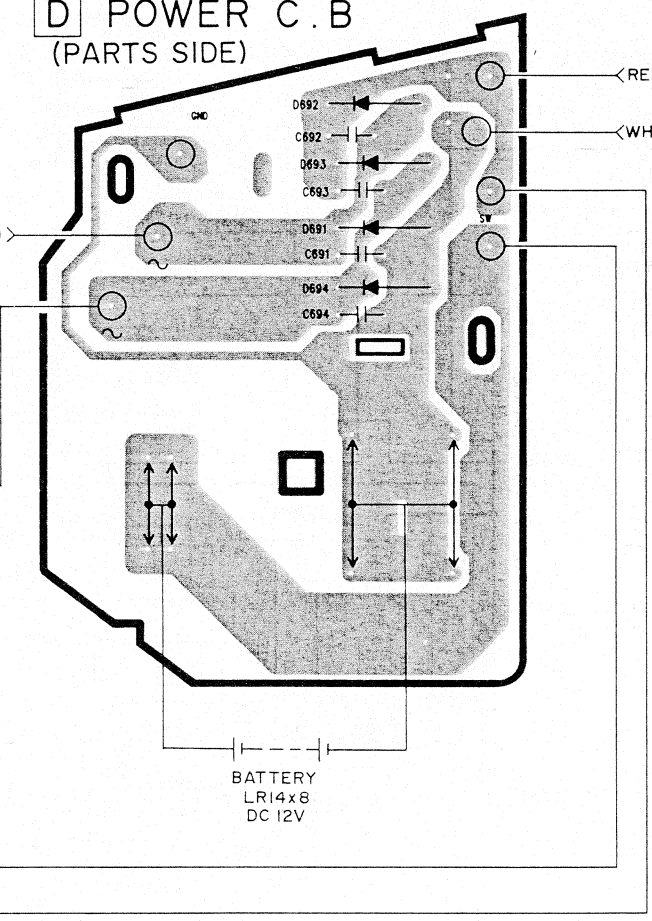
SW901
AC VOLTAGE
AC 110-120V/220-240V

PT901
(POWER TRANSFORMER)

J901
AC ~

BATTERY
LR14x8
DC 12V

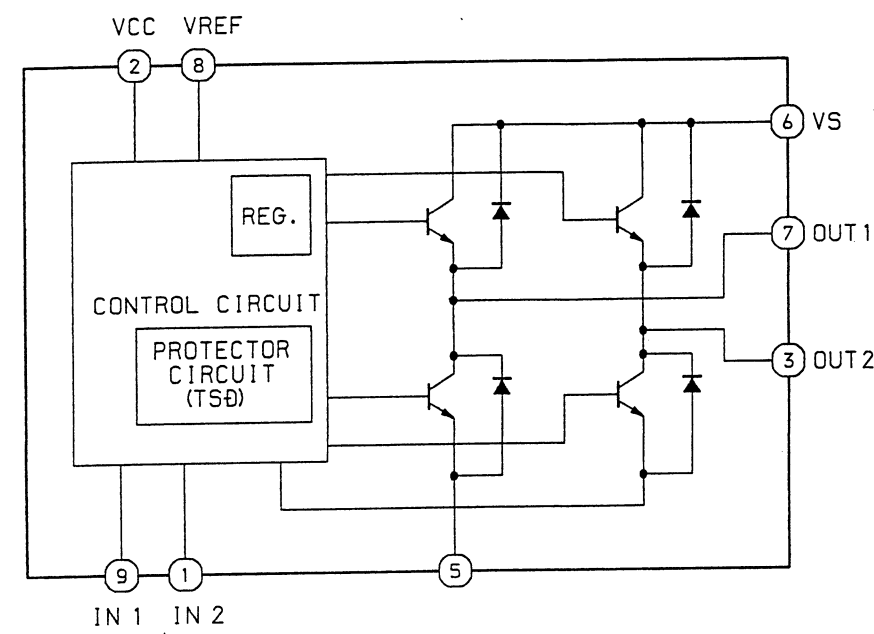
109N01
CN601
TO MAIN C.B. [A]



TA8125SN (DC-DC CONVERTER)

FM
W/SW

IC BLOCK DIAGRAM
IC, TA7291S

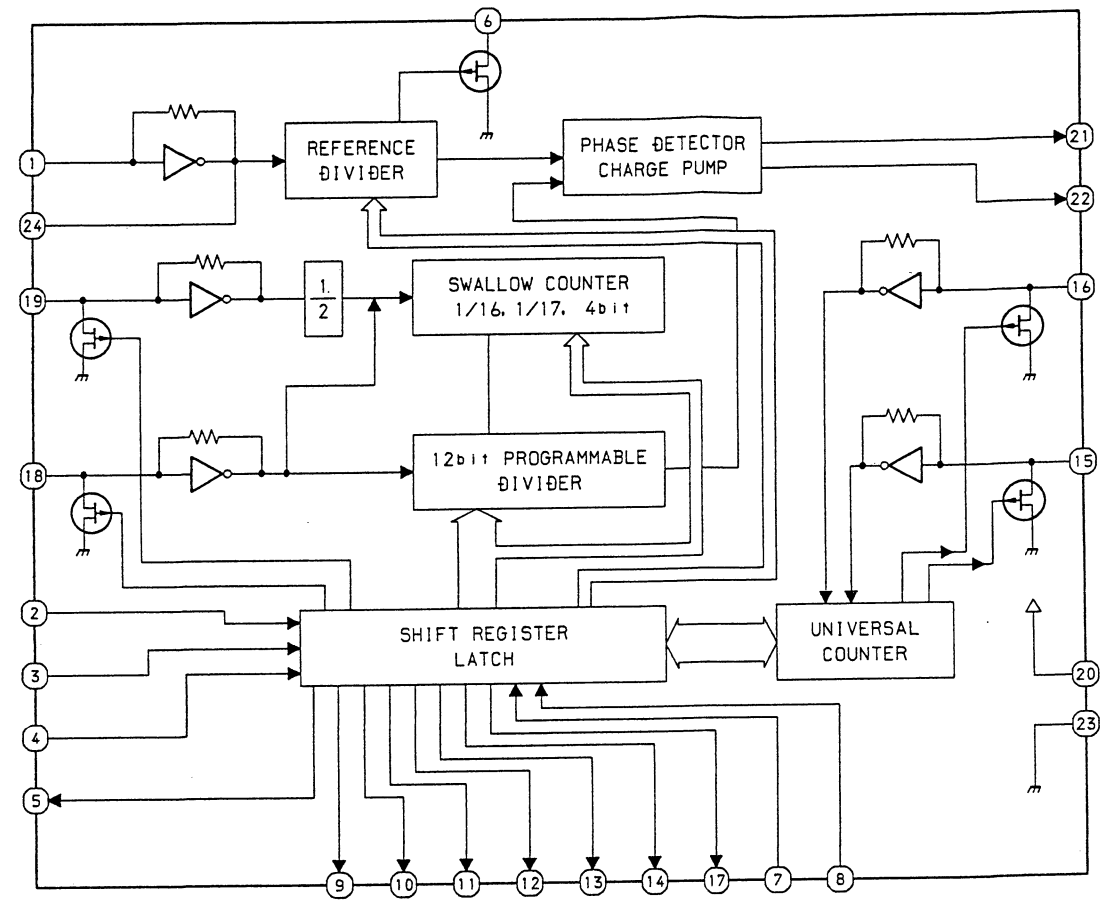


TRUTH TABLE

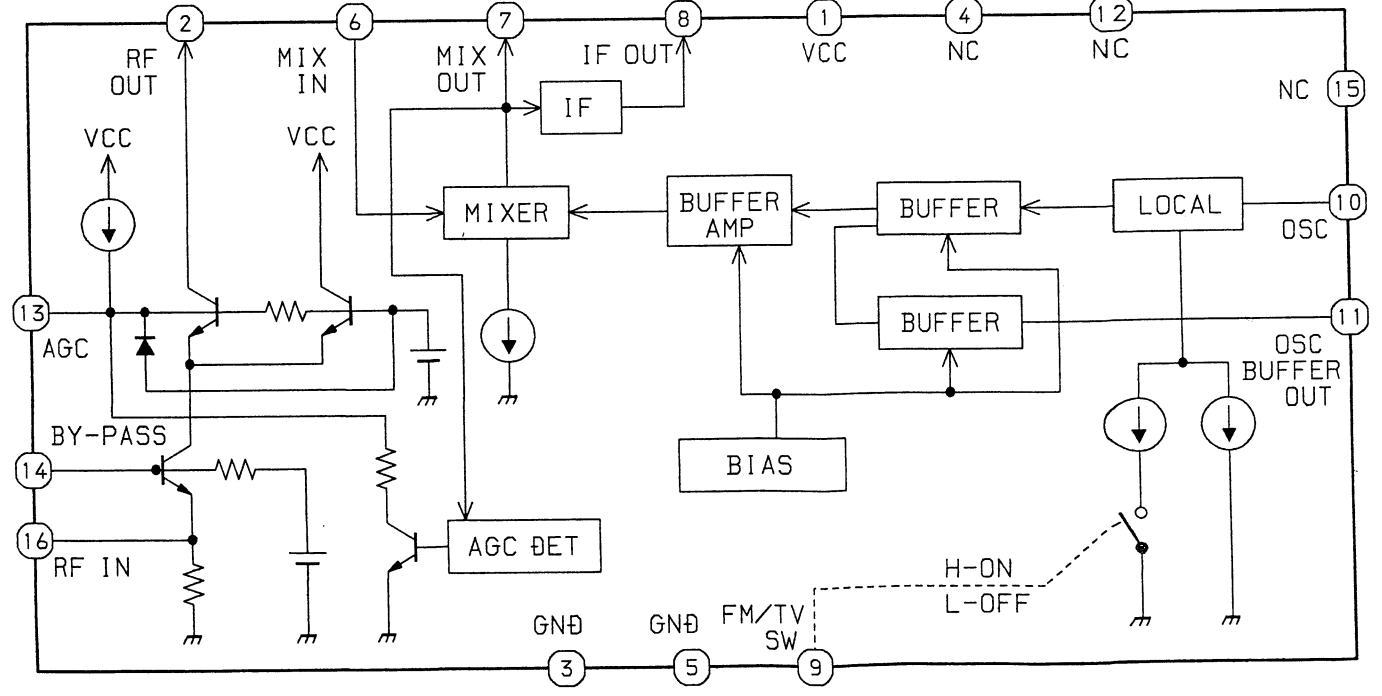
INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW
0	1	L	H	CCW
1	1	L	L	BRAKE

∞ : HI IMPEDANCE
NOTE : INPUT "H" ACTIVE

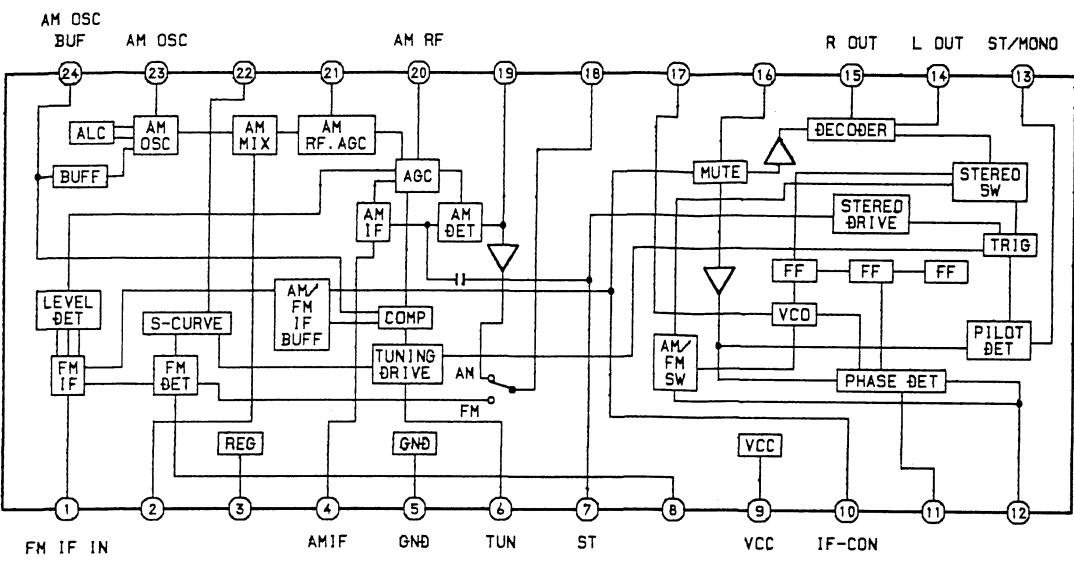
IC, LC7218



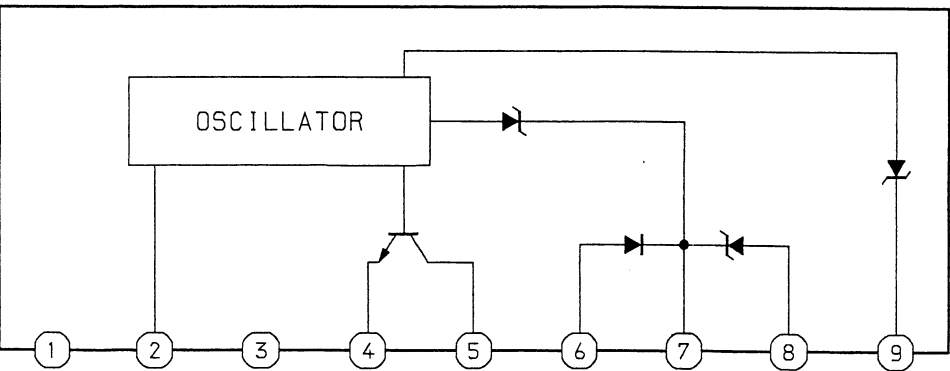
IC, TA8176SN



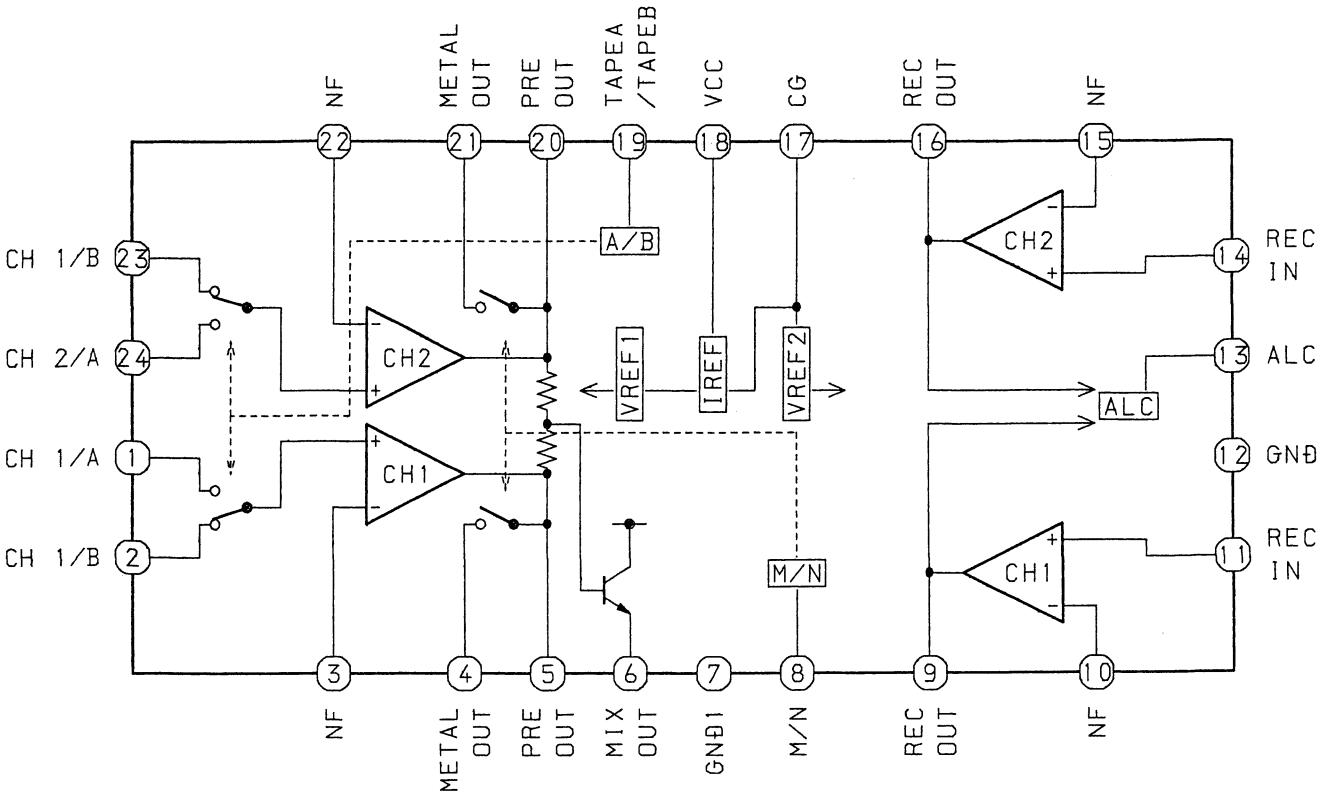
IC, LA1831N



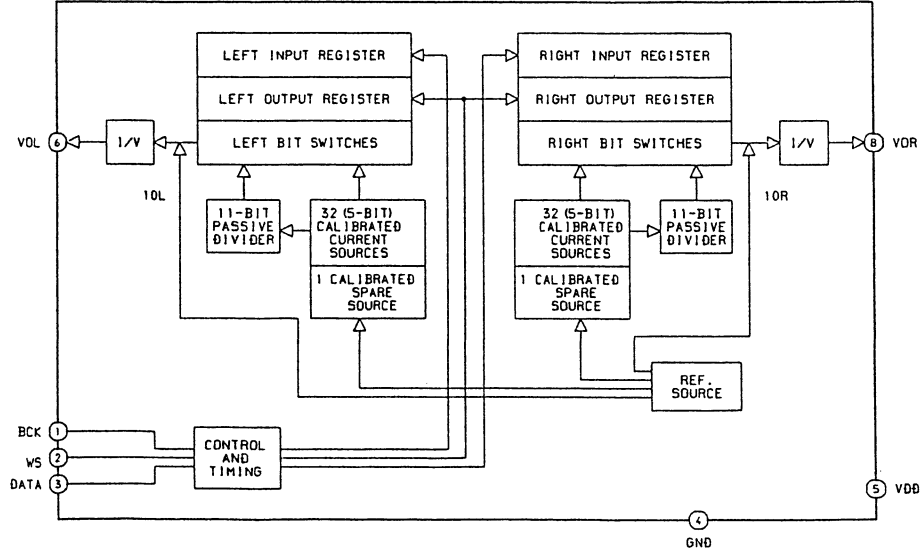
IC, TA8126S



IC, TA8189N



IC, TDA1311AT



IC DESCRIPTION

IC, TC9236F

Pin No.	Pin Name	I/O	Description
1	TEST4	I	Test terminal. Normally "H" or open. (Not used.)
2	TEST5	I	Test terminal. Normally "H" or open. (Not used.)
3	CK8M	O	8M clock output terminal. (Not used.)
4	COFS	O	Correction sytem frame frequency signal output terminal. 7.35 kHz (Not used.)
5	SPDA	O	Processor status signal output terminal. Correction/discrimination data, memory buffer capacity, etc. (Not used.)
6	PFCK	O	Playback system frame frequency signal output terminal. 7.35 kHz (Not used.)
7	SUBSYC	O	Subcode sync signal output terminal. (Not used.)
8	SUBQ	O	Subcode Q data output terminal. (Not used.)
9	SBOK	O	Subcode Q data CRC check data output terminal. OK when "H". (Not used.)
10	XI	I	Crystal oscillator connection terminal.
11	XO	O	Crystal oscillator connection terminal.
12	DVCC	—	Digital power voltage terminal. (+5 V)
13	DGND	—	Digital GND terminal.
14~17	BUS0~BUS3	I/O	Command and data send/receive I/O terminal.
18	CCE	I	Chip enable signal input terminal for command and data send/recieve. Bus line active when "L".
19	BUCK	I	Command and data send/receive clock input terminal.
20	4MCK	O	4M clock output terminal. 4.2366 MHz (Not used.)
21	RST	I	Reset input terminal. Internal system reset when "L".
22	CCNT	I	Subcode Q data control bit update inhibition signal input terminal. Update inhibited when "H". (GND)
23	SUDO	O	Subcode P - W output terminal. (Not used.)
24	CLCK	I	Subcode P - W data read-out clock input terminal.
25	LOCK	O	Lock status output terminal. "L" when sync pattern signal in EFM signal is not detected within 17 ms in runaway detection. (Not used.)
26	TEST1	I	Test terminal. Normally "H" or open. (Not used.)
27	DFCT	O	Defect detection signal output terminal. VREF when a defect signal is detected: Normally HiZ. (Not used.)
28, 29	TEL2, TEL1	O	Tracking gain adjustment analog switch output terminal. VREF or HiZ.
30	TGUL	O	Analog switch output terminal for switching the low range phase compensator of the tracking servo loop. HiZ (gain up) when shock signal is detected; VREF when gain up.
31, 32	TGUH2, TGUH1	O	Analog switch output terminal for switching the middle and high range phase compensator of the tracking servo loop. HiZ (gain up) when shock signal is detected; normally VREF. TGUH1 is used when playing back in normal mode; TGUH2 when playing back in high speed mode. (Pin ③1 is not used.)
33	TKIC	O	Tracking actuator kick signal output terminal. Kicked to an external cylinder when "H"; an internal cylinder when "L".

Pin No.	Pin Name	I/O	Description																
34 35	FMON $\overline{\text{FMON}}$	O	Feed servo ON/OFF analog switch output terminal. (Pin 35 is not used.) <table><tr><td>Feed servo</td><td>FMON</td><td>$\overline{\text{FMON}}$</td></tr><tr><td>ON</td><td>HiZ</td><td>VREF</td></tr><tr><td>OFF</td><td>VREF</td><td>HiZ</td></tr></table>	Feed servo	FMON	$\overline{\text{FMON}}$	ON	HiZ	VREF	OFF	VREF	HiZ							
Feed servo	FMON	$\overline{\text{FMON}}$																	
ON	HiZ	VREF																	
OFF	VREF	HiZ																	
36	FMFB	I	Feed motor FWD/BWD operation control signal output terminal. Feeds to an external cylinder when “H”; feeds to an internal cylinder when “L”.																
37	$\overline{\text{TEST}}$	O	Test terminal. Normally “H” or open. (Not used.)																
38	DMON	O	Analog switch output terminal for switching the gain of the disk motor drive circuit.																
39	DMFC	O	Disk motor CLV servo AFC signal output terminal. <table><tr><td>Command</td><td>DMFC output</td><td>Operation</td></tr><tr><td>DMFK</td><td>H</td><td>Motor accelerated</td></tr><tr><td>DMSV</td><td>PWM</td><td>CLV servo ON</td></tr><tr><td>DMBK</td><td>L</td><td>Motor decelerated</td></tr><tr><td>DMOFF</td><td>VREF</td><td>CLV servo OFF</td></tr></table>	Command	DMFC output	Operation	DMFK	H	Motor accelerated	DMSV	PWM	CLV servo ON	DMBK	L	Motor decelerated	DMOFF	VREF	CLV servo OFF	
Command	DMFC output	Operation																	
DMFK	H	Motor accelerated																	
DMSV	PWM	CLV servo ON																	
DMBK	L	Motor decelerated																	
DMOFF	VREF	CLV servo OFF																	
40	DMPC	O	Disk motor CLV servo APC signal output terminal.																
41	2VREF	I	Two times reference voltage input terminal. (VREF × 2)																
42	SEL	O	Servo mode indication signal output terminal. <table><tr><td>SEL</td><td>LD ON/OFF</td><td>Focus servo</td><td>Operation mode</td></tr><tr><td>L</td><td>OFF</td><td>ON</td><td>LD OFF</td></tr><tr><td>HiZ</td><td>ON</td><td>OFF</td><td>Focus search</td></tr><tr><td>H</td><td>ON</td><td>ON</td><td>Normal PLAY etc., (Focus servo ON: FOK)</td></tr></table>	SEL	LD ON/OFF	Focus servo	Operation mode	L	OFF	ON	LD OFF	HiZ	ON	OFF	Focus search	H	ON	ON	Normal PLAY etc., (Focus servo ON: FOK)
SEL	LD ON/OFF	Focus servo	Operation mode																
L	OFF	ON	LD OFF																
HiZ	ON	OFF	Focus search																
H	ON	ON	Normal PLAY etc., (Focus servo ON: FOK)																
43	FCSI	O	Focus actuator drive signal output terminal in focus search mode. <table><tr><td>Command</td><td>FKIC output</td><td>Operation</td></tr><tr><td>FGASR</td><td>H</td><td>Lens distant from disk</td></tr><tr><td>FGSS</td><td>L</td><td>Lens near disk</td></tr><tr><td>Others</td><td>HiZ</td><td>Other than focus search</td></tr></table>	Command	FKIC output	Operation	FGASR	H	Lens distant from disk	FGSS	L	Lens near disk	Others	HiZ	Other than focus search				
Command	FKIC output	Operation																	
FGASR	H	Lens distant from disk																	
FGSS	L	Lens near disk																	
Others	HiZ	Other than focus search																	
44	FKIC	O	Focus actuator drive signal output terminal in focus gain adjustment mode. (Not used.) <table><tr><td>Command</td><td>FKIC output</td><td>Operation</td></tr><tr><td>FGASR</td><td>H</td><td>Lens distant from disk</td></tr><tr><td>FGSS</td><td>L</td><td>Lens near disk</td></tr><tr><td>Other</td><td>HiZ</td><td>Other than focus gain adjustment</td></tr></table>	Command	FKIC output	Operation	FGASR	H	Lens distant from disk	FGSS	L	Lens near disk	Other	HiZ	Other than focus gain adjustment				
Command	FKIC output	Operation																	
FGASR	H	Lens distant from disk																	
FGSS	L	Lens near disk																	
Other	HiZ	Other than focus gain adjustment																	
45, 46	FEL2, FEL1	O	Focus gain adjustment analog switch output terminal. (Not used.)																
47	FEI	I	Focus error signal input terminal.																
48	TESH	I	Analog switch input terminal for sample-holding of the tracking error signal.																
49	TEOF	O	Analog switch input terminal for tracking servo ON/OFF. VREF when tracking servo is OFF.																

Pin No.	Pin Name	I/O	Description								
50	SBAD	I	Sub-beam add signal input terminal.								
51	RFRP	I	RF ripple signal input terminal.								
52	VREF	I	Reference voltage input terminal. (+2.2 V)								
53	RFI	I	RF signal input terminal.								
54	AGND	—	Analog GND terminal.								
55	DTSC2	O	EFM signal negative-phase output terminal for data slice control.								
56	EFMO	O	EFM signal monitor output terminal. (Not used.)								
57	DTSC1	O	EFM signal positive-phase output terminal for data slice control.								
58	AVCC	—	Analog power voltage terminal. (+5 V)								
59	PDCNT	I	PDO output control terminal. PDO output is involuntarily set to HiZ when “L”.								
60	PDO	O	Output terminal for phase difference signal between EFM and PLCK signals.								
61	TMAX	O	TMAX signal output terminal. HiZ in system clock.								
			<table><tr><td>TMAX cycle</td><td>TMAX output</td></tr><tr><td>Longer than specified cycle</td><td>L</td></tr><tr><td>Shorter than specified cycle</td><td>H (2VREF)</td></tr><tr><td>Sspecified cycle</td><td>HiZ</td></tr></table>	TMAX cycle	TMAX output	Longer than specified cycle	L	Shorter than specified cycle	H (2VREF)	Sspecified cycle	HiZ
			TMAX cycle	TMAX output							
			Longer than specified cycle	L							
			Shorter than specified cycle	H (2VREF)							
Sspecified cycle	HiZ										
62	LPFN	I	LPF amplifier negative-phase input terminal for PLL.								
63	LPFO	O	LPF amplifier output terminal for PLL.								
64	VCOF	I	VCO filter terminal.								
65	VCOX	I	External VCO clock input terminal. (GND)								
66	PLCK	O	Playback data read clock output terminal. (Not used.)								
67~69	MOD0~MOD2	I	Internal operation mode setting input terminal. (GND)								
70	WDCK	O	Word clock output terminal. Normally 88.2 kHz. (Not used.)								
71	CHCK	O	Channel clock output terminal. Normally 44.1 kHz.								
72	BCK	O	Bit clock output terminal. Normally 1.4112 MHz.								
73	AOUT	O	Audio data output terminal.								
74	CKSE	I	Internal clock selection terminal. (+5 V)								
75	DOUT	O	Digital OUT output terminal. (Not used.)								
76	TEST2	I	Test terminal. Normally “H” or open. (Not used.)								
77	HS	O	High-speed monitor output terminal. High-speed mode when “L”. (Not used.)								
78	EMPH	O	Emphasis ON/OFF indication signal output terminal. Emphasis ON when “H”.								
79	TEST3	I	Test terminal. Normally “H” or open. (Not used.)								
80	MCK	O	Master clock output terminal. (Not used.)								

IC, TA8191F

Pin No.	Pin Name	I/O	Description
1	TPO	O	Sub-beam I-V amplifier (TP AMP) output terminal.
2	TPI	I	Sub-beam I-V amplifier (TP AMP) input terminal.
3	TNI	I	Sub-beam I-V amplifier (TP AMP) input terminal.
4	FNI	I	Main-beam I-V amplifier (FM AMP) input terminal.
5	FPI	I	Laser diode amplifier (LD AMP) input terminal.
6	LDO	O	Laser diode amplifier (LD AMP) output terminal.
7	MDI	I	Monitor photo diode amplifier (MD AMP) input terminal.
8	RFN	I	RF amplifier (RF AMP) negative-phase input terminal.
9	RFO	O	RF amplifier (RF AMP) output terminal.
10	RFI	I	RF ripple signal output terminal.
11	VREF	O	Reference voltage output terminal. (+2.1 V)
12	RFRP	O	RF ripple signal output terminal.
13	SBAD	O	Scratch detection signal output terminal.
14	FEB	I	Focus error balance adjustment input terminal.
15	FEO	O	Focus error amplifier (FE AMP) output terminal.
16	SEL	I	Analog switch control signal input terminal.
17	VEE	—	Power terminal. (TA8190F: -5V; TA8191F: GND)
18	FSN	I	Focus output amplifier (FS AMP) negative-phase output terminal.
19	FSO	O	Focus output amplifier (FS AMP) output terminal.
20	COSC	O	Capacitor connection terminal for focus search signal generation.
21	OSCI	I	Built-in power supply control input terminal for focus search signal generation.
22	GND	—	GND.
23	VCC	I	Power supply terminal. (+5 V)
24	DMEP	I	Disk motor amplifier (DM AMP) positive-phase input terminal.
25	DMEN	I	Disk motor amplifier (DM AMP) negative-phase input terminal.
26	DMEO	O	Disk motor amplifier (DM AMP) output terminal.
27	DMPO	O	Disk motor drive amplifier (DMP AMP) output terminal. (Not used.)
28	PVR	I	Drive amplifier reference voltage input terminal.
29	FMPO	O	Feed motor drive amplifier (FMP AMP) output terminal.
30	FMEO	O	Feed motor drive amplifier (FM AMP) output terminal.
31	FMEN	I	Feed motor amplifier (FM AMP) negative-phase input terminal.
32	FMEP	O	Feed motor amplifier (FM AMP) positive-phase input terminal.
33	FAPO	O	Focus actuator drive amplifier (FAP AMP) output terminal. (Not used.)
34	2VRO	I	2VREF amplifier (2VREF AMP) output terminal.
35	2VRP	I	2VREF amplifier (2VREF AMP) positive-phase input terminal.
36	2VRN	I	2VREF amplifier (2VREF AMP) negative-phase input terminal.
37	TS2O	O	Tracking servo amplifier 2 (TS2 AMP) output terminal.
38	TS2N	I	Tracking servo amplifier 2 (TS2 AMP) negative-phase input terminal.
39	TS2P	I	Tracking servo amplifier 2 (TS2 AMP) positive-phase input terminal.
40	TS1O	O	Tracking servo amplifier 1 (TS1 AMP) output terminal.
41	TS1N	I	Tracking servo amplifier 1 (TS1 AMP) negative-phase input terminal.

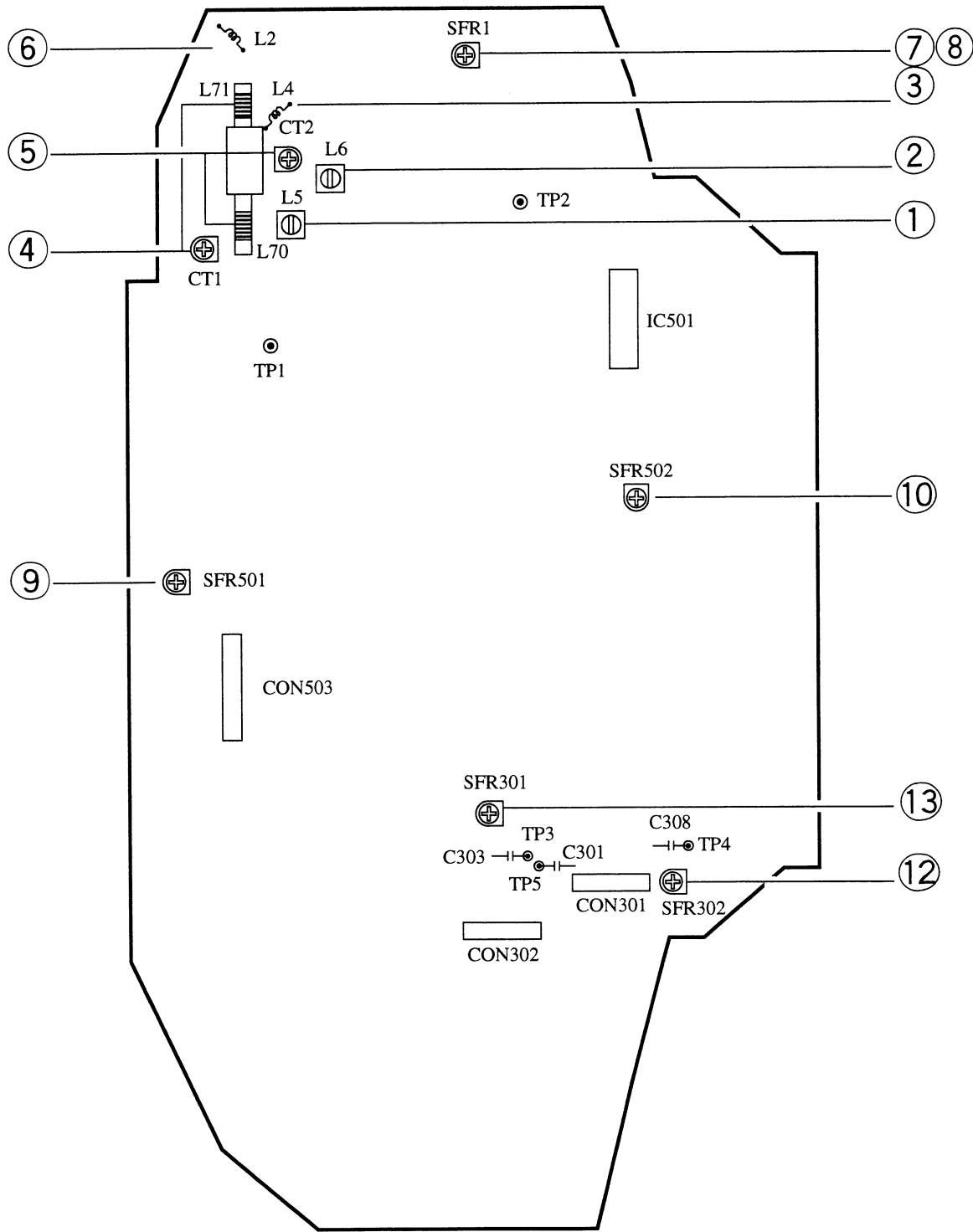
Pin No.	Pin Name	I/O	Description
42	TS1P	I	Tracking servo amplifier 1 (TS1 AMP) positive-phase input terminal.
43	TSO	O	Tracking output amplifier (TS AMP) output terminal.
44	TSN	I	Tracking output amplifier (TS AMP) negative-phase input terminal.

IC, TMP47C820DF-NA41

Pin No.	Pin Name	I/O	Description			
1~4	SEG28~SEG31	O	Segment output terminal for LCD1-4. Segment output terminal for LCD.			
5~7	COM1~COM3	O	Common output terminal for LCD.			
8	COM4	—	Not used.			
9	N. C	—	Not used.			
10	VLC	I	LCD drive voltage setting. Normal: VSS level (GND)			
11, 12	EQ. B, EQ. A	O	PRESET EQ control output.	EQ. A	EQ. B	
				H	L	OFF
				L	L	ROCK
				H	H	POP
				L	H	CLASSIC
13	$\overline{\text{KO1}}$	O	Key matrix output port.			
14	$\overline{\text{KO2}}$	O	Key matrix output port.			
15	VSS	—	GND.			
16~18	$\overline{\text{KO3}}\sim\overline{\text{KO5}}$	O	Key matrix output port.			
19	TU-MUTE	O	Mute output to tuner: Mute on at H output.			
20	TEST	—	Not used.			
21	X IN	I	4.19MHz clock oscillation input.			
22	X OUT	O	4.19MHz clock oscillation output.			
23	$\overline{\text{RESET}}$	I	Reset signal input. (“L” when reset.)			
24	$\overline{\text{HOLD}}$	I	Hold signal input. (+5 V)			
25~28	$\overline{\text{KI1}}\sim\overline{\text{KI4}}$	I	Key matrix input port.			
29	REMOTE	I	Wireless remote control input.			
30	OP	O	CD loading: OPEN output			
31	CLS	O	CD loading: CLOSE output			
32	MUTE	O	Mute on at H output.			
33	VDD	—	+5 V power supply.			
34	SI	I	Tuner data input.			
35	SO	O	Tuner data output.			
36	SCLK	O	Tuner data clock.			
37~40	BUS0~BUS3	I/O	Send/receive bus line to/from CD processor. (Not used.)			
41	$\overline{\text{CCE}}$	I/O	Command and data processing control I/O.			
42	BUCK	O	Command and data send/receive clock output.			
43	$\overline{\text{PU INNER}}$	I	Detects that the pickup is positioned at the most internal cylinder. Most internal cylinder when “L”.			
44	CLOSE	I	CD loading: CLOSE detection			
45	CD	I	Function CD. CD when “H”.			
46	TUNER	I	Function TUNER. TUNER when “H”.			
47	$\overline{\text{CD RESET}}$	I	CD circuit initialize signal input. (Reset when “L”.)			
48	OPEN	I	CD loading: OPEN-SW detection			
49	R70	O	High speed dubbing output.			

Pin No.	Pin Name	I/O	Description
50	PLLCE	O	Tuner CE. Controls the tuner PLL IC.
51	X IN	I	32.768kHz clock oscillation input for display.
52	X OUT	O	32.768kHz clock oscillation output for display. (Not used.)
53~61	SEG0~SEG8	O	Not used.
62~80	SEG9~SEG27	O	Segment output terminal for LCD display.

A MAIN C.B (PARTS SIDE)



< RADIO SECTION >

1. MW VT Adjustment (HE, LH models)
 - 1) Set the function to MW and set the frequency display to 530 kHz.
 - 2) Adjust L5 of the MW OSC coil until the VT voltage at TP1 becomes 1.2 ± 0.05 V.
 - 3) Set the frequency display to 1635 kHz. Confirm that the VT voltage is 8.5 ± 0.4 V.
1. LW VT Adjustment (EEZ, EZ models)
 - 1) Set the function to LW and set the frequency display to 153 kHz.
 - 2) Adjust L5 of the LW OSC coil until the VT voltage at TP1 becomes 2.0 ± 0.05 V.
 - 3) Set the frequency display to 288 kHz. Confirm that the VT voltage is 6.0 ± 0.5 V.
2. SW VT Adjustment (HE, LH models)
 - 1) Set the function to SW and set the frequency display to 3.8 MHz.
 - 2) Adjust L6 of the SW OSC coil until the VT voltage at TP1 becomes 1.2 ± 0.05 V.
 - 3) Set the frequency display to 12.5 MHz. Confirm that the VT voltage is 8.4 ± 0.5 V.
2. MW VT Adjustment (EEZ, EZ models)
 - 1) Set the function to MW and set the frequency display to 522 kHz.
 - 2) Adjust L6 of the MW OSC coil until the VT voltage at TP1 becomes 1.3 ± 0.05 V.
 - 3) Set the frequency display to 1611 kHz. Confirm that the VT voltage is 7.7 ± 0.5 V.
3. FM VT Adjustment
 - 1) Set the function to FM and set the frequency display to 87.5 MHz.
 - 2) Adjust L4 until the VT voltage at TP1 becomes 4.0 ± 0.1 V.
 - 3) Set the frequency display to 87.5 MHz. Confirm that the VT voltage is 4.0 ± 0.1 V.
4. MW Tracking Adjustment (HE, LH models)

L71	600 kHz
CT1	1400 kHz
4. LW Tracking Adjustment (EEZ, EZ models)

L71	153 kHz
CT1	288 kHz

5. SW Tracking Adjustment (HE, LH models)

L70	3.8 MHz
CT2	12.5 MHz
5. MW Tracking Adjustment (EEZ, EZ models)

L70	603 kHz
CT2	1404 kHz
6. FM Tracking Adjustment

L2	87.5 MHz
----------	----------
7. FM AUTO STOP Level Adjustment

Condition: • Adjustment point: SFR1
• Test point: TP2

Method: Adjust SFR1 to obtain 30 ± 1 dB at FM 98.0 MHz.
8. MW AUTO STOP Level Adjustment

Condition: • Adjustment point: SFR1
• Test point: TP2

Method: Adjust SFR1 to obtain $55 \text{ dB} \pm 8 \text{ dB}$ at MW 1000 kHz (HE, LH) / 999 kHz (EEZ, EZ).

< TAPE RECORDER SECTION >

9. Tape Speed Adjustment

Condition: • Test tape: TTA-100 (TTA-111S)
• Test point: Headphone output (J601)
• Adjustment location: SFR501

Method: Playback the test tape and adjust so that the frequency counter reading becomes 3 kHz.
10. Bias Adjustment

Condition: • Adjustment location: SFR502

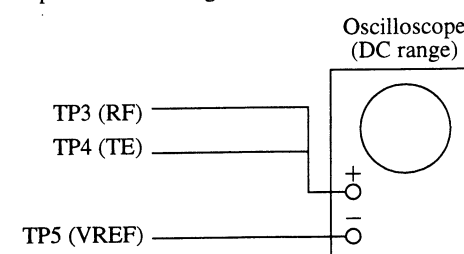
Method: Setup the record mode. Activate bias oscillator. Adjust so that the test point voltage becomes 14 V to 15 V on voltmeter. (Perform this adjustment for both decks 1 and 2.)
11. Azimuth Adjustment

Condition: • Test tape: TTA-320 (TTA-113B, TTC-152)
• Test point: Headphone output (J601)
• Adjustment location: Azimuth adjustment screw

Method: Playback the test tape and adjust so that the waveform on the oscilloscope is maximum. (Perform this adjustment on the both deck 1 and deck 2.)

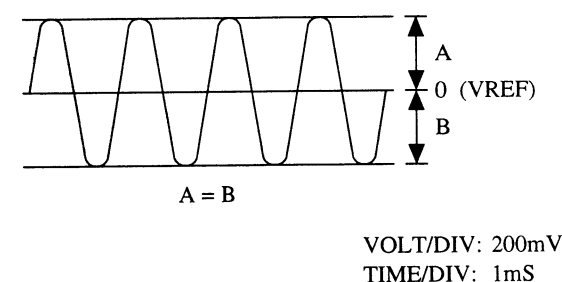
< CD SECTION >

Oscilloscope connection diagram

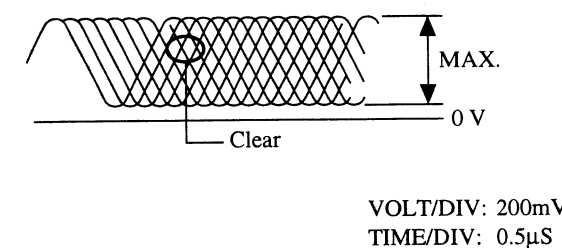


Connect the (-) terminal of an oscilloscope to TP3 (VREF) of an oscilloscope during adjustment.

12. Tracking Balance Adjustment
 - 1) Connect an oscilloscope to between test point TP4 (TE) and TP5 (VREF).
 - 2) Insert the disk YEDS-18 (YEDS-1) and press PLAY.
 - 3) Press REPEAT to enter the repeat mode.
 - 4) Keep pressing the button. (MS state)
 - 5) Adjust SFR302 until the traverse waveform is vertically symmetrical on oscilloscope.



13. Focus Balance Adjustment
 - 1) Connect an oscilloscope to between test point TP3 (RF) and TP5 (VREF).
 - 2) Insert the disk YEDS-18 (YEDS-1) and press PLAY.
 - 3) Adjust SFR301 until the waveform is maximum on oscilloscope.



PRACTICAL SERVICE FIGURE

< RADIO SECTION >

HE MODEL

Sensitivity:
(IHF, THD 3%)
(S/N 10dB)
(S/N 10dB)

FM Less than 24dB (98MHz)
MW 50 ± 4 dB (999kHz)
SW Less than 48dB (8MHz)

LH MODEL

Sensitivity:
(IHF, THD 3%)
(S/N 10dB)

FM Less than 24dB (98MHz)
AM 50 ± 4 dB (1000kHz)

EEZ, EZ MODELS

Sensitivity:
(IHF, THD 3%)
(S/N 10dB)
(S/N 10dB)

FM Less than 24dB (98MHz)
MW 50 ± 4 dB (999kHz)
LW 54 ± 4 dB (207kHz)

Intermediate frequency:

FM 10.7MHz
AM 450kHz

FM stereo separation:

27 ± 3 dB (98MHz)

< TAPE RECORDER SECTION >

Recording bias frequency:
Erasing ratio (W/FILTER):
Distortion (T, H, D 10%):
S/N ratio:

71.5 ± 0.5 kHz
50dB
Less than 4.8% (PB)
40dB (AC/DC, PB)
35dB (AC/DC, REC/PB)

Noise (PB):

Less than 1mV
(AC/DC, MIN)

Tape speed:

$3000 \pm \frac{1}{2}$ Hz

Wow & flutter:

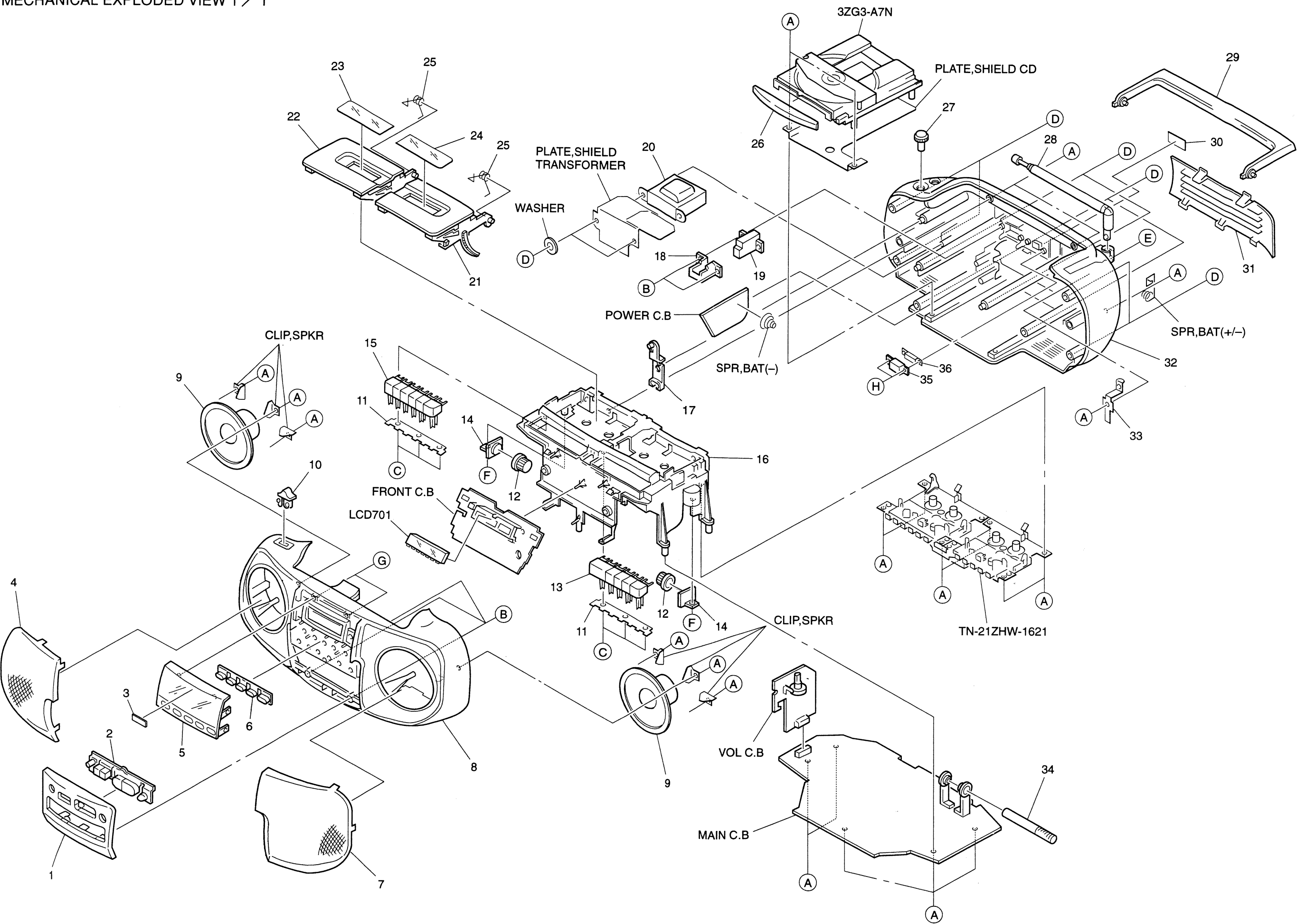
0.35% (JIS, UN WTD)

Take-up torque:

40~70g-cm

F.F & REW torque:

Less than 50g-cm

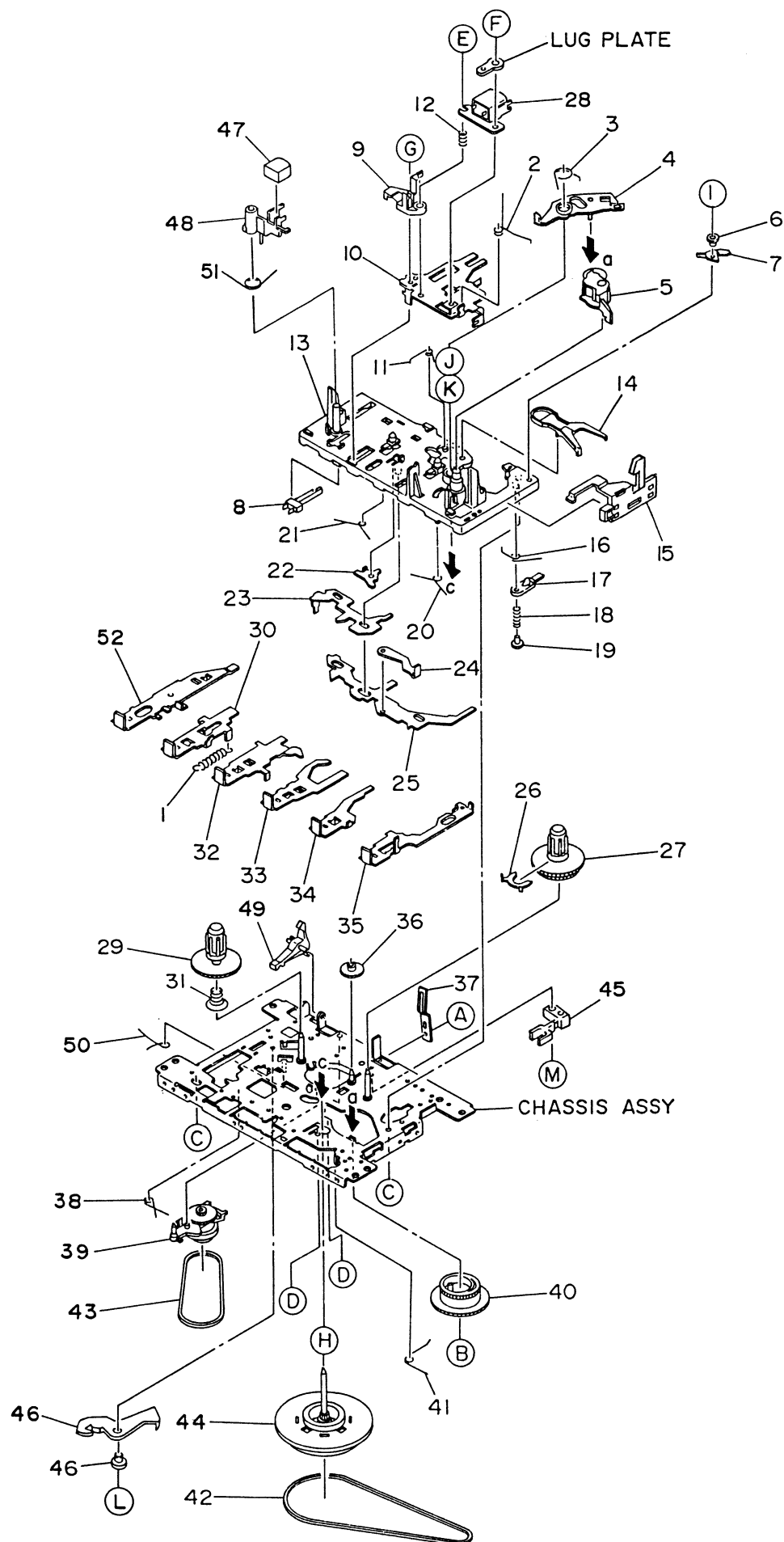


MECHANICAL PARTS LIST 1 / 1

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REF. NO.	PART NO.	カンリ NO.	DESCRIPTION	REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
1	S5-438-030-200		PANEL, FRONT (SR615EX)	24	S5-438-310-100		LENS, DOOR CASS(R)
2	S5-438-140-010		KNOB, CD (GRY)	25	S5-438-320-000		SPR, DOOR CASS
3	S0-410-210-000		LOGO AIWA	26	S5-438-100-100		PANEL, CD
4	S5-438-220-010		GRILL, SPKR (L)	27	S5-438-150-000		KNOB, VOLUME
5	S5-438-040-200		WINDOW DISPLAY (SR615EX)	28	S0-172-380-000		ANT, ROD TELESCOPIC
6	S5-438-130-000		KNOB, BAND (BLK)	29	S5-438-090-000		HANDLE (D-GRY)
7	S5-438-230-010		GRILL, SPKR (R)	30	S5-438-410-000		PLATE VOLTAGE<EEZ, EZ>
8	S5-438-010-200		CAB, FRONT (SR615EX)	31	S5-438-080-010		DOOR, BAT
9	S4-040-080-140		SPEAKER (BLK)	32	S5-438-020-200		CAB, REAR (SR615EX)
10	S5-438-160-000		KNOB, FUNCTION (D-GRY)	33	S5-438-260-000		PLATE, ANT
11	S5-438-240-000		HOLDER KNOB	34	S0-101-000-010		FERRI, BAR 10-100M (SW) <HE, LH>
12	S7-138-260-000		GEAR, DOOR CASS	34	S0-101-000-000		FERRI, BAR 10-100MM (LW) <EEZ, EZ>
13	S5-438-180-000		KNOB, CASS (R)	35	S2-838-080-000		VOLT, SW COVER<HE, LH>
14	S7-138-270-000		HOLDER, GEAR DOOR, CASS	△36	S1-200-000-030		SW, SLIDE SS12J01M-A-65<HE, LH>
15	S5-438-170-000		KNOB, CASS (L)	A	87-741-096-410		SCREW, ST3-10MM
16	S5-438-070-010		CHASSIS CD	C	87-743-073-410		SCREW, ST2.6-6MM
17	S5-438-200-000		LEVER, FUNCTION (BLK)	D	87-751-102-410		SCREW, ST 3-20
18	S2-838-070-000		AC SOCKET COVER BLK	E	87-741-096-010		SCREW, 3-10MM PM
△19	S2-201-000-050		AC SOCKET 220V<HE, EEZ, EZ>	F	87-261-095-010		SCREW, ST3-8MM HEAD V5.9-6.3 B
19	87-099-711-019		SOCKET, AC (CSDSR510) <LH>	G	87-751-074-410		SCREW, ST 2.6-8
△20	S4-854-381-400		PT, EI-57/24 (EZ) <EEZ, EZ>	H	87-343-075-210		SCREW, ST 2.6-10<HE, LH>
△20	S4-954-381-300		PT, EI-57/24 (H) <HE, LH>				
21	S5-438-060-100		DOOR, CASS (R)				
22	S5-438-050-100		DORR, CASS (L)				
23	S5-438-300-100		LENS, DOOR CASS (L)				

TAPE MECHANISM EXPLODED VIEW 1 / 2

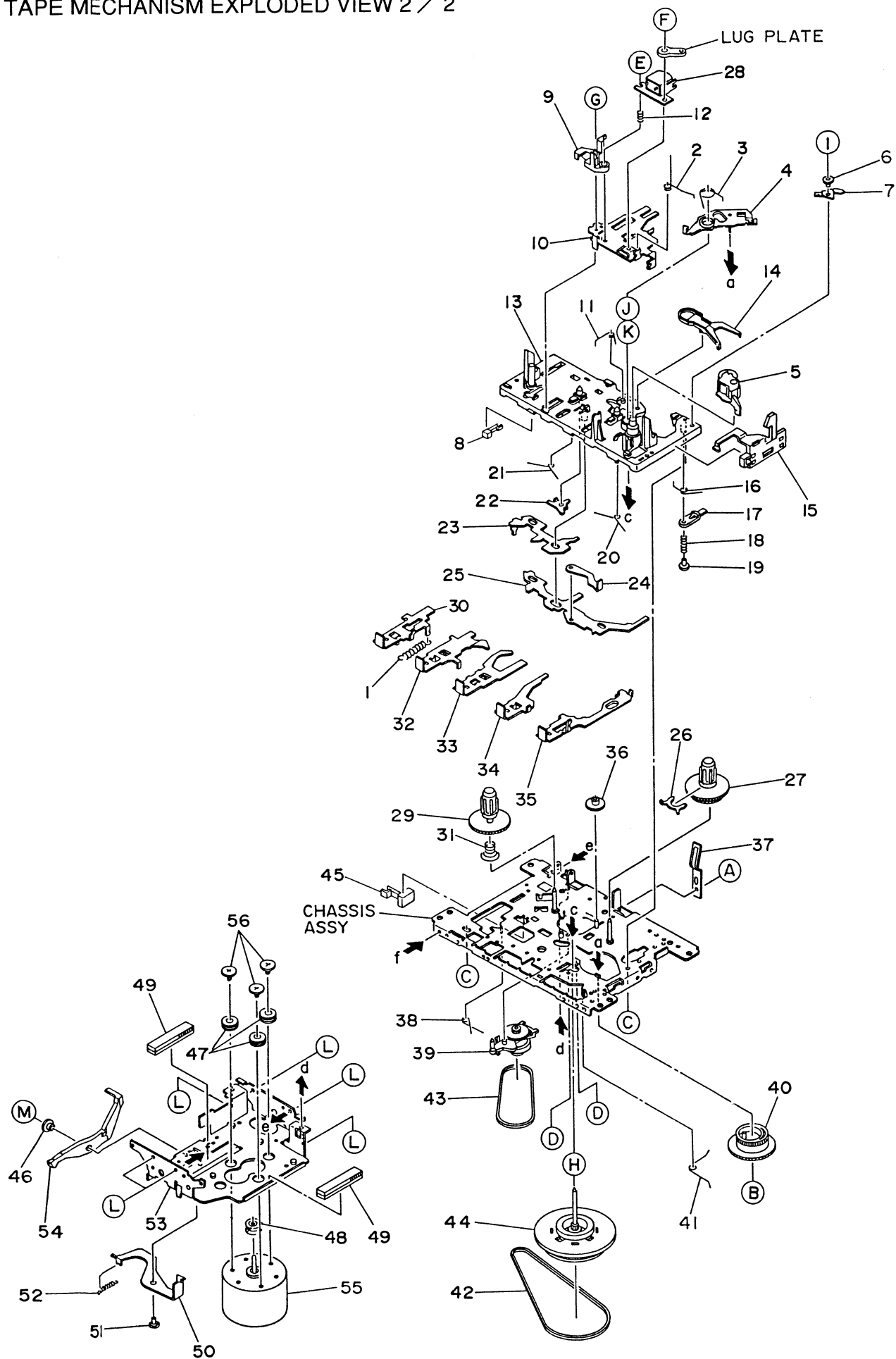


TAPE MECHANISM PARTS LIST 1 / 2

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REF. NO.	PART NO.	カンリ NO.	DESCRIPTION	REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
1	S1-821-010-500		PLAY BUTTON LEVER SPRING	36	S1-821-100-700		FF GEAR
2	S1-921-030-090		PANEL P SPRING	37	S1-829-100-010		PACK SPRING
3	S1-921-260-050		GEAR PLATE SPRING	38	S1-921-140-170		P.S.LEVER SPRING
4	S1-921-265-020		GEAR PLATE ASSY	39	S1-921-073-080		RF CLUTCH ASSY
5	S1-921-043-000		PINCH ROLLER ARM ASSY	40	S1-921-260-020		CAM GEAR
6	S1-921-140-370		P ARM COLLER	41	S1-921-140-160		E ACTUATOR SPRING
7	S1-921-140-340		P ARM	42	S1-921-090-240		MAIN BELT
8	S6-401-011-520		LEAF SW MSW-1541F	43	S1-921-070-030		RF BELT
9	S1-921-030-4A0		HEAD BASE	44	S1-921-093-030		FLYWHEEL ASSY
10	S1-921-030-110		HEAD PANEL	45	S6-401-010-380		LEAF SW MSW-1275
11	S1-921-140-18A		M CONTROL SPRING	46	S1-921-020-010		REC ARM
12	S1-821-030-070		AZIMUTH SPRING	47	S6-209-100-100		E HEAD PH-K380-MS1
13	S1-921-143-010		BASE ASSY	48	S1-921-030-050		MG ARM
14	S1-921-260-4A0		SENSING LEVER	49	S1-821-100-690		RECORD SAFETY LEVER
15	S1-921-130-010		EJECT SLIDE LEVER	50	S1-921-140-210		REC BUTTON LEVER SPRING
16	S1-921-140-13A		P CONTROL SPRING	51	S1-921-030-100		MG ARM SPRING
17	S1-921-140-820		PAUSE LEVER(F)	52	S1-921-140-220		REC BUTTON LEVER
18	S1-921-140-120		PAUSE LEVER SPRING	A	S9-P33-200-320		DEL TITE SCREWM2-3
19	S1-921-140-110		PAUSE STOPPER	B	S9-422-000-000		P WASHER CUT 12-3.8-0.3
20	S1-921-140-150		BUTTON LEVER SPRING(B)	C	S9-679-000-000		P TAP SCREW M2-5
21	S1-921-140-140		BUTTON LEVER SPRING(A)	D	S9-999-180-090		TAP SCREW M2-4.5
22	S1-921-140-200		PR STOPPER	E	S9-922-000-000		AZIMUTH SCREW M2-8
23	S1-921-140-090		SWITCH ACTUATOR	F	S9-115-000-000		+ BIND SCREW M2-3
24	S1-821-011-590		E KICK LEVER	G	S9-004-000-000		SCREW M2-6
25	S1-921-140-080		PUSH BUTTON ACTUATOR	H	S9-882-000-000		P WASHER 2-3.5-0.4
26	S1-921-050-060		SENSOR	I	S9-999-200-410		P TAP SCREW M2-3
27	S1-921-053-030		TAKE UP REEL ASSY	J	S9-999-030-130		P WASHER CUT 1.45-3.8-0.
28	S6-201-011-110		HEAD,RP7442ES-0951	K	S9-999-000-030		P WASHER2.1-4-0.13
29	S1-921-053-040		SUPPLY REEL ASSY	L	S9-180-000-000		C TAP SCREW M2-4
30	S1-921-140-230		PLAY BUTTON LEVER	M	S9-181-000-000		C TAP SCREW M2-5
31	S1-821-100-990		BACK TENSION SPRING				
32	S1-921-140-240		REW BUTTON LEVER				
33	S1-921-140-250		FF BUTTON LEVER				
34	S1-921-140-260		STOP BUTTON LEVER				
35	S1-921-140-610		PAUSE BUTTON LEVER				

TAPE MECHANISM EXPLODED VIEW 2 / 2

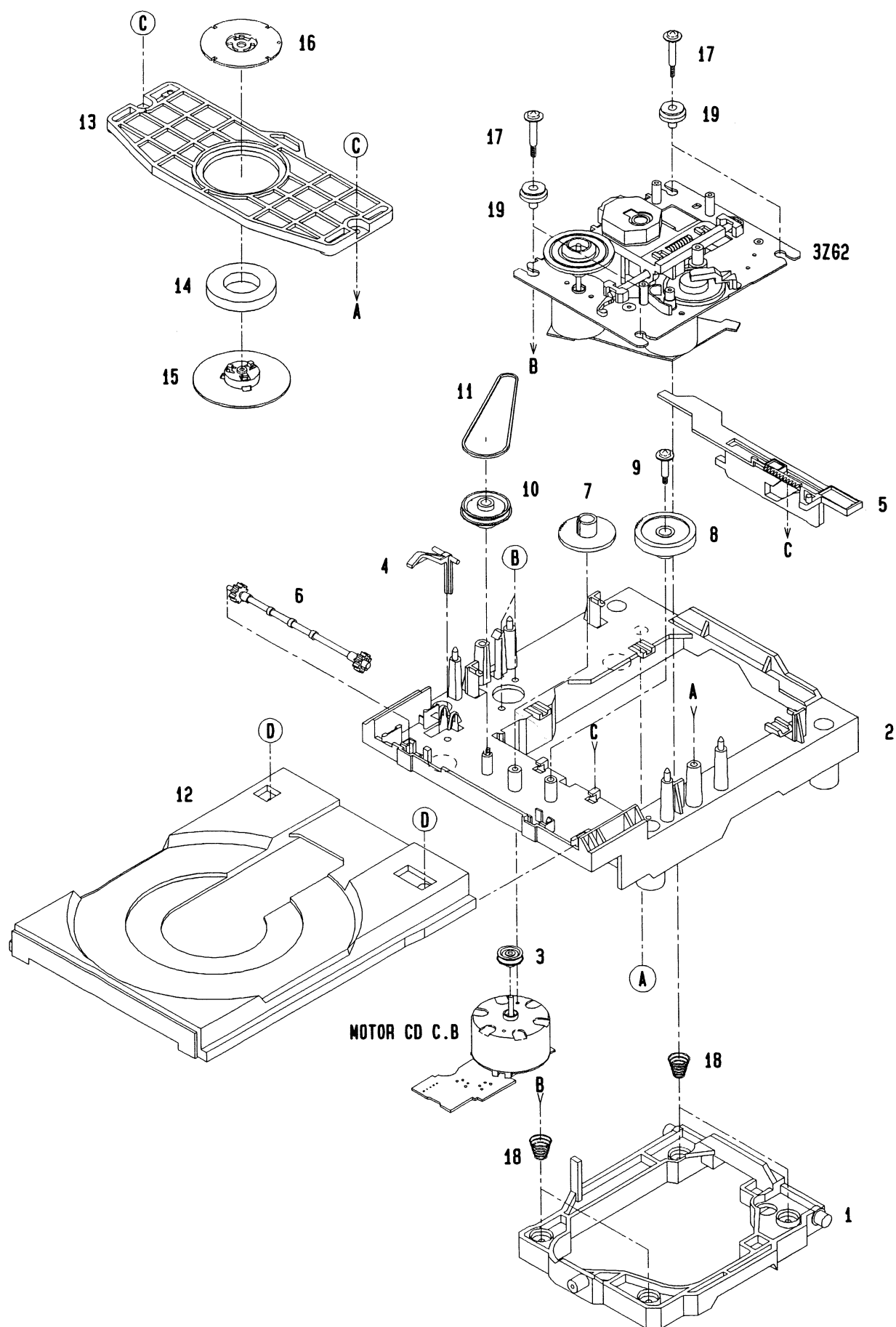


TAPE MECHANISM PARTS LIST 2 / 2

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REF. NO.	PART NO.	カンリ NO.	DESCRIPTION	REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
1	S1-821-010-500		PLAY BUTTON LEVER SPRING	36	S1-821-100-700		FF GEAR
2	S1-921-030-090		PANEL P SPRING	37	S1-829-100-010		PACK SPRING
3	S1-921-260-050		GEAR PLATE SPRING	38	S1-921-140-170		P.S.LEVER SPRING
4	S1-921-265-020		GEAR PLATE ASSY	39	S1-921-073-080		RF CLUTCH ASSY
5	S1-921-043-000		PINCH ROLLER ARM ASSY	40	S1-921-260-020		CAM GEAR
6	S1-921-140-370		P ARM COLLER	41	S1-921-140-160		E ACTUATOR SPRING
7	S1-921-140-340		P ARM	42	S1-921-090-240		MAIN BELT
8	S6-401-011-520		LEAF SW MSW-1541F	43	S1-921-070-030		RF BELT
9	S1-921-030-4A0		HEAD BASE	44	S1-921-093-040		FLYWHEEL ASSY
10	S1-921-030-110		HEAD PANEL	45	S6-401-011-610		LEAF SW MSW-17820MVEI
11	S1-921-140-18A		M CONTROL SPRING	46	S1-821-120-650		COLLER B
12	S1-821-030-070		AZIMUTH SPRING	47	S1-820-130-060		MOTOR RUBBER
13	S1-921-143-010		BASE ASSY	48	S1-921-120-130		MOTOR PULLEY
14	S1-921-260-4A0		SENSING LEVER	49	S1-921-120-120		ANTI VIBR FELT MAT
15	S1-921-130-010		EJECT SLIDE LEVER	50	S1-821-120-680		P KICK LEVER (A)
16	S1-921-140-13A		P CONTROL SPRING	51	S1-821-120-230		PK COLLER SCREW A
17	S1-921-140-820		PAUSE LEVER(F)	52	S1-821-120-250		P KICK LEVER SPRING
18	S1-921-140-120		PAUSE LEVER SPRING	53	S1-921-120-110		MOTOR BRACKET
19	S1-921-140-110		PAUSE STOPPER	54	S1-921-120-090		P KICK LEVER
20	S1-921-140-150		BUTTON LEVER SPRING(B)	55	S6-002-030-290		MOTOR EG530YD-2BH
21	S1-921-140-140		BUTTON LEVER SPRING(A)	56	S1-821-120-020		MOTOR COLLER SCREW
22	S1-921-140-200		PR STOPPER	A	S9-P33-200-320		DEL TITE SCREWM2-3
23	S1-921-140-090		SWITCH ACTUATOR	B	S9-422-000-000		P WASHER CUT 12-3.8-0.3
24	S1-821-011-590		E KICK LEVER	C	S9-679-000-000		P TAP SCREW M2-5
25	S1-921-140-080		PUSH BUTTON ACTUATOR	D	S9-999-180-090		TAP SCREW M2-4.5
26	S1-921-050-060		SENSOR	E	S9-922-000-000		AZIMUTH SCREW M2-8
27	S1-921-053-030		TAKE UP REEL ASSY	F	S9-115-000-000		+ BIND SCREW M2-3
28	S6-201-011-110		HEAD,RP7442ES-0951	G	S9-004-000-000		SCREW M2-6
29	S1-921-053-040		SUPPLY REEL ASSY	H	S9-882-000-000		P WASHER 2-3.5-0.4
30	S1-921-140-230		PLAY BUTTON LEVER	I	S9-999-200-410		P TAP SCREW M2-3
31	S1-821-100-990		BACK TENSION SPRING	J	S9-999-030-130		P WASHER CUT 1.45-3.8-0.
32	S1-921-140-240		REW BUTTON LEVER	K	S9-999-000-030		P WASHER2.1-4-0.13
33	S1-921-140-250		FF BUTTON LEVER	L	S9-180-000-000		C TAP SCREW M2-4
34	S1-921-140-260		STOP BUTTON LEVER	M	S9-182-000-000		C TAP SCREW M2-6
35	S1-921-140-610		PAUSE BUTTON LEVER				

CD MECHANISM EXPLODED VIEW 1 / 2

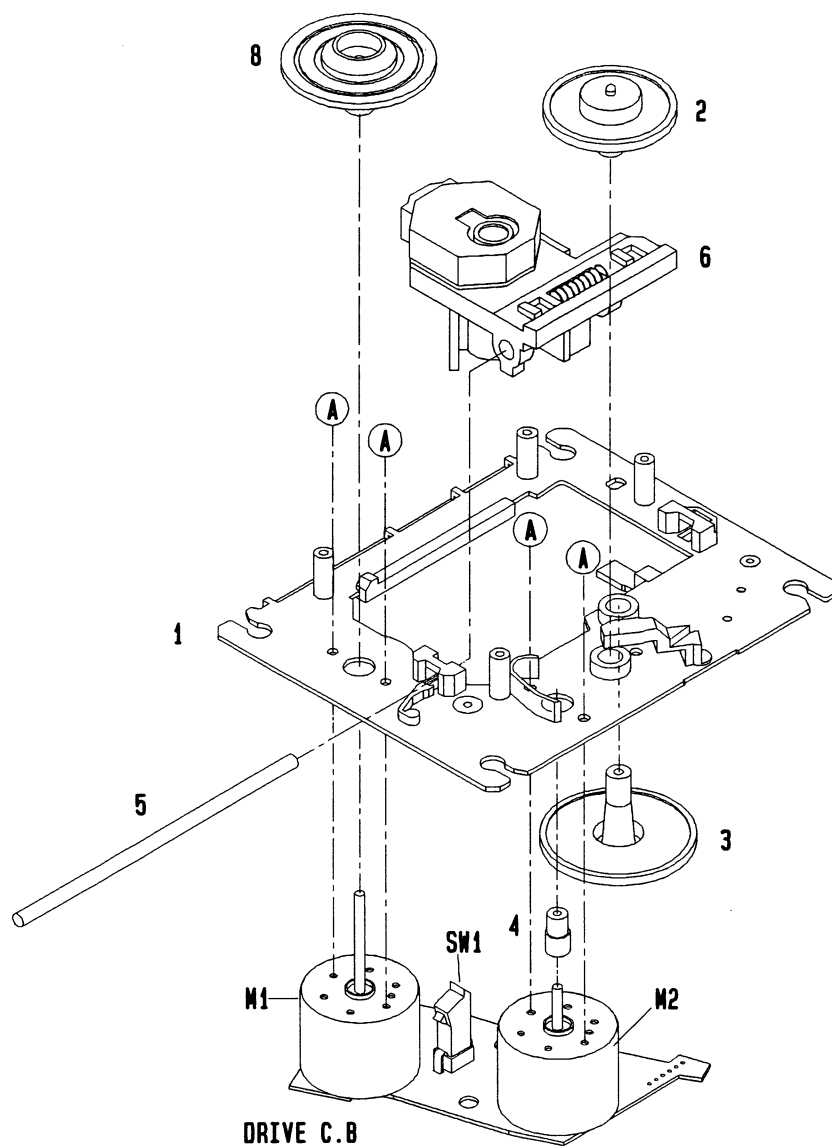


CD MECHANISM PARTS LIST 1 / 2

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REF. NO.	PART NO.	カンリ NO.	DESCRIPTION	REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
1	83-ZG3-202-01K		HLLDR, MECH	16	83-ZG3-211-01K		PLATE, DISC
2	83-ZG3-228-21K		CHAS, L6	17	81-ZG1-254-019		S-SCEW, MECH HLLDR
3	83-ZG3-208-01K		PULLEY, MOTOR	18	83-ZG3-216-019		SPR-C, L
4	83-ZG3-213-01K		LVR, SW	19	83-ZG3-215-019		CUSH-G, MAIN
5	83-ZG3-209-01K		CAM, SLIDE	A	87-067-945-119		VFT2+3-12 (F10)
6	83-ZG3-207-01K		GEAR, TRAY	B	87-251-071-119		U+2.6-4
7	83-ZG3-204-01K		GEAR, C	C	87-512-074-219		VFT2+2.6-8
8	83-ZG3-205-01K		GEAR, D	D	87-352-075-219		VT2+2.6-10
9	83-ZG3-217-019		S-SCREW, GEAR D				
10	83-ZG3-220-11K		GEAR, PULLEY 2				
11	83-ZG3-214-019		BELT, L				
12	83-ZG3-229-01K		TRAY, CD 2				
13	83-ZG3-210-01K		HLLDR, CHUCK				
14	83-ZG3-602-010		RING, MAG				
15	83-ZG3-212-01K		CAP, DISC				

CD MECHANISM EXPLODED VIEW 2 / 2



CD MECHANISM PARTS LIST 2 / 2

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REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
1	83-ZG2-202-51K		O-SERT S ASSY, S
2	83-ZG2-204-419		GEAR, A
3	83-ZG2-205-219		GEAR, B
4	83-ZG2-220-01K		GEAR MOTOR 2
5	83-ZG2-207-119		SHAFT, SLIDE
6	87-070-109-019		KSS 212A, PICKUP UNIT
8	83-ZG2-222-01K		TURN TABLE, A5
A	87-261-032-219		SCREW V+2-3

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
サージサプレッサ	SERGESUPPRESSOR
セラコン	CAP, CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	CURSOR
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ジグアーム	ARM, SHAFT
ジグガイド	GUIDE, SHAFT
ストラップ	STRAP
トクナベ	S-SCREW
ヒンジ	HINGE
ヒンジビス	S-SCREW
ビスセレート	SCREW, SERRART